

REPORT OF INDUSTRIAL USER COMPLIANCE SAMPLING INSPECTION

AT

BIG OX ENERGY SIOUXLAND

1616 D Avenue, South Sioux City, Nebraska 68776

NPDES Permit Number: IA0043095 (Sioux City Iowa STP)

ON

January 10 – 12, 2017

BY THE

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region VII

Environmental Sciences and Technology Division

INTRODUCTION

At the request of the Water, Wetlands, and Pesticides Division, Water Enforcement Branch, I conducted an Industrial User Compliance Sampling Inspection at the Big Ox Energy facility in South Sioux City, Nebraska, on January 10 – 12, 2017. The inspection was conducted under the authority of Section 308 of the Clean Water Act, as amended, and in accordance with EPA Region VII Standard Operating Procedures for Compliance Inspections (ENST SOP No. 2332). This narrative report and the attachments present the results of the inspection. Information about the South Sioux City, Nebraska, collection system and Sioux City, Iowa, pretreatment program collected from respective City officials are also included. An Industrial User Compliance Evaluation Inspection was also conducted at the nearby CHS, Inc., industrial facility. That inspection is briefly discussed herein. Full details may be found in the separate inspection report for the CHS facility.

PARTICIPANTS

Big Ox Energy:

Kevin Bradley, Business & Economic Development
Jason Osbahr, Director of Project Development & Engineering
Rob Ernest, General Manager
Perry Winkler, Plant Manager

City of South Sioux City, Nebraska:

Lance Hedquist, City Administrator
Robert Livermore, Public Works Director

McClure Engineering Company:

Tim Higgins, Technical Expert-Utilities

City of Sioux City, Iowa:

Desiree McCaslen, Pretreatment Manager
Jim Maynes, Wastewater Plant Superintendent
Justin Vondrak, Assistant City Attorney

CHS, Inc.:

Chris Oehler, Plant Manager
Scott E. Duncan, Environmental, Health, and Safety Coordinator
Jeremy MacClure, Plant Engineer

Nebraska Department of Environmental Quality (NDEQ):

Curtis Christiansen, P.E., NDEQ Central Office
Terry Johnson, Program Specialist, Norfolk Field Office

U.S. Environmental Protection Agency (EPA) Region VII:

Peter Green, Environmental Scientist
Lantz Tipton, Environmental Scientist

BACKGROUND / FACILITY DESCRIPTION

Big Ox Energy Siouxland (BOE) is a waste-to-energy facility located in the Roth Industrial Park in South Sioux City, Nebraska (map, aerial photos-Attachment 1). The facility was constructed in 2016 and was issued a Significant Industrial User Wastewater Discharge Permit by the City of Sioux City, Iowa, on May 1, 2016. It began operating on September 2, 2016, and began discharging wastewater on or around September 12. There are currently around 35 employees at the facility, which operates in three shifts around the clock. The pretreatment permit lists Standard Industrial Code 2869; Resource Recovery and Manufacturer of Industrial Organic Chemicals. The plant utilizes two types of wastes to feed anaerobic digesters which produce methane gas. When fully operational, the gas produced will be scrubbed, compressed, and conveyed to an interstate pipeline.

The facility takes up to 1.8 million gallons per day (MGD) of industrial wastewaters piped in from three nearby industries through the South Sioux City collection system: CHS, Richardson Milling, Inc. (RMI), and Beef Products, Inc. (BPI). It also takes approximately 0.2 MGD of liquid industrial wastes that are trucked in.

Prior to the start-up of BOE, wastewater from these three industries was pumped from the Roth Lift Station to a gravity sewer along C Avenue. The C Avenue line flows north into the 39th Street sewer, which continues east to Bennet Avenue, then north to the Bennet Lift Station. Combined with flows from the Floyd Lift Station, they are then pumped underneath the Missouri River to the Sioux City Iowa Sewage Treatment Plant (STP). The Bennet Lift Station was built in 2007 and is equipped with three pumps, each with a capacity of 1800-2000 gallons per minute (gpm) (total capacity ~ 7.8 MGD). (Note: Most of the recent odor complaints and high H₂S measurements are clustered around neighborhoods along the 39th Street gravity sewer, both west ["upstream"] and east ["downstream"] of the line coming into it from C Avenue, and on Bennet Avenue just south of the point where the line turns north).

The industries paid the City of Sioux City based on a two-tier fee structure; discharges of 5-day biochemical oxygen demand (BOD₅), fats, oils, and grease (FOG), and total suspended solids (TSS) in excess of domestic concentrations (300 mg/L, 100 mg/L, and 250 mg/L, respectively) were charged one rate, and higher concentrations (>1200, 400, or 2000 mg/L) were surcharged at a higher rate.

Since the BOE facility came on line, the industrial wastewaters from these three industries have been pumped to BOE for preliminary treatment before being returned to the South Sioux City collection system. The industries now pay the City of South Sioux City, which has a one-tier fee structure based on volume, BOD, FOG, and TSS. Their pretreatment permits issued by Sioux City, Iowa (Attachment 2) will expire in April 2017 and will not be renewed. South Sioux City's current sewer use ordinance has limits for only one wastewater parameter-pH, which is limited to 5.0 - 9.5. The City plans to adopt additional sewer use requirements and/or pretreatment permits in consultation with the affected industries before their current permits expire in April.

A Tipping Agreement (obtained from the City through a §308 information request) between the City of South Sioux City and BOE requires the City to pay BOE a guaranteed minimum payment of \$225,000 per month to pre-treat the industrial wastes from the three industries. Under the terms of the agreement, BOE is required to accept those wastes. In turn, BOE pays user fees to Sioux City, Iowa, based on their two-tier fee structure to treat their wastewater discharges at the Sioux City STP.

Process flow diagrams are included in Attachment 3. The first diagram was provided by BOE to the EPA in response to a §308 information request. The second, larger flow diagram was provided by Mr. Osbahr during the inspection and contains more detailed information. Processing of the two "feedstocks"; 1) industrial wastewater and 2) trucked-in liquids; are as follows:

1) Industrial Wastewater: Industrial wastewater coming into the BOE facility (~1.8 MGD) enters a [REDACTED] wastewater equalization tank that is the feed tank for the dissolved air flotation (DAF) system. This tank has an overflow port that discharges directly to the sewer. Wastewater pumped out of this tank passes through a rotary screen and is split into two parallel DAF systems (one tank with two chambers; photo 10). The GEM ("gas energy mixing") DAF system is a newer DAF technology that allows greater process control and higher throughput with a smaller footprint than conventional DAFs (www.cleanwatertech.com). The process is run at a pH of approximately [REDACTED] and is shut down if the pH reaches [REDACTED]. Ferric chloride and both anionic and cationic polymers are used to promote coagulation and optimize separation. The stainless steel DAF is fully enclosed and is vented through a passive air scrubber system to the roof. Each of the two parallel tanks has a flow capacity of 1050 gpm (1.5 MGD each). The design capacity was based on the volumes of wastewater discharged by the three industrial dischargers in 2014. One or both sides can be operated as necessary to handle the flows. Mr. Osbahr said that BOE would handle future growth by adding a second GEM DAF tank (doubling their capacity from 3 MGD to 6 MGD.) The solids which float to the top of the DAF tanks are skimmed off and stored in two sludge tanks. The "float" or sludge (currently about 40,000 gallons per day, or gpd), is then transferred to the [REDACTED] equalization/mix tank at the north end of the plant where they are mixed with trucked-in liquid wastes used as food for the anaerobic digesters. The DAF effluent is discharged to an effluent pit along with any overflow from the DAF equalization tank and is pumped to the sanitary sewer. The average pollutant concentrations in BOE's effluent discharges in September and October were: BOD~1800 mg/L; FOG~ 63 mg/L; TSS~700 mg/L.

2) Hauled-in Wastes: BOE also takes in approximately 0.2 MGD of non-hazardous liquid industrial wastes hauled in by truck. These shipments are a primary feedstock for the anaerobic digesters and they are carefully scheduled in advance to ensure an appropriate mix of food for the digesters. The tanker trucks are unloaded in an enclosed bay at the north end of the building into two receiving pits (photos 13, 14). On the day of this inspection, 18 truckloads of paunch manure were hauled in from the nearby Tyson Fresh Meats beef processing facility. This was more than half of the wastes received that day. Mr. Osbahr said that this was fairly typical. Packaged products (e.g., expired canned pet food) are also

received here. They are depackaged by machine and mixed with the trucked-in wastes in a [REDACTED] receiving tank. The wastes from this tank, along with the receiving pits, are transferred to a [REDACTED] equalization/mixing tank for liquid industrial wastes. The mixed wastes are then pumped through a heat exchanger into two [REDACTED] anaerobic digesters, which are plug-flow and operated in series. Blood protein meal, seed enzymes, and bacteria are added as needed to optimize biological processes in the digesters. Mr. Osbahr said that the pH in the digesters typically starts at approximately [REDACTED] at the beginning of the primary digester and increases to about [REDACTED] by the end of the secondary digester. The digester gas normally consists of approximately 2/3 methane and 1/3 carbon dioxide, with a few parts per million (ppm) of hydrogen sulfide. A pressure relief valve maintains a pressure of approximately 0.75 psi. The gases are collected and piped to a gas cleanup pad at the southwest end of the plant property. When the plant is fully operational, the gas produced will flow directly into a gas pipeline. To date, however, all of the gas produced has been flared off. The gas cleanup system was being prepared for startup at the time of this inspection.

The digested wastes emerging from the secondary digester contain ~10% to 18% solids. They are pumped to two parallel centrifuges (photo 16) for dewatering. The finished sludge is very dry (50% - 60% moisture), lightweight, and fibrous in nature. It is loaded through a hopper onto semi-trucks staged inside the building (photo 9). Currently, all of the sludge is being hauled to a landfill, but BOE expects to sell it in the future as a fertilizer/soil amendment. The centrate (liquids separated in the centrifuges) is conveyed to a wet well which also captures all the floor drains in the building. From there, they are pumped to the DAF feed tank where they are blended with the screened industrial wastewater to be treated in the DAF.

In summary, there are two waste treatment processes at this facility: 1) industrial wastewater is treated through a DAF system; and 2) more concentrated trucked-in wastes are processed through anaerobic digesters. The two processes are connected at two points: 1) solids from the industrial wastewater (DAF skimmings) are added to the anaerobic digesters; and 2) liquids from the digested, trucked-in wastes (centrate) are mixed with the industrial wastewater being sent through the DAF. This means that the chemistry in the DAF system is influenced by the contents of the digesters, and the digester chemistry/biology can be affected by floated solids from the wastewater stream.

The tanks and equipment in the plant are monitored through a plant-wide SCADA (supervisory data acquisition and control) system. There are display panels distributed throughout the plant, and the system can also be accessed from remote locations by authorized staff.

Operational History: The BOE facility began accepting industrial wastewater for the first time on September 2. It began discharging treated wastewater several days later. On October 31, following public odor complaints, BOE agreed to stop taking in industrial wastewater. On or around November 2, they stopped discharging wastewater. The DAF equalization tank was drained and cleaned out. The industrial wastewaters were diverted around the BOE treatment system directly into the South Sioux City collection system (the same flow pattern that had existed prior to BOE's startup). In order to keep the biology alive in the digesters, BOE continued to take in hauled-in wastes. They continued to operate the centrifuges and the centrate (up to 150,000 gallons per day) was hauled by tanker truck directly to the Sioux City STP. Some odors generated during the filling of tankers outside the building were the subject of complaints. Mr. Osbahr said the odors were generated by the venting of air through ports in the top of the tankers as it was displaced by wastewater during filling.

In their efforts to control sulfides in the gravity sewer along C Avenue, the City installed a 4200-gallon Bioxide tank and injection pump at a manhole in front of entrance drive to the BPI (Beef Products, Inc.)

facility. They began injecting Bioxide (a formulation containing nitrogen, which ties up the sulfide ion) on November 2. The City also installed hydrogen peroxide injection points near the Archer Daniels Midland (ADM) facility (photo 1), at the Bennet Street Lift Station, and at 39th and G Avenue.

On Wednesday, January 4, at 5 p.m., BOE began accepting industrial wastewater again and resumed the discharge of treated wastewater to the city sewer.

Hydrogen Sulfide (H₂S) Levels: A comprehensive analysis of the factors contributing to odors and H₂S in the South Sioux City collection system is beyond the scope of this report/inspection. But a number of factors can affect the amount of H₂S observed in the collection system. Sulfides and sulfates are common constituents of industrial and domestic wastewaters. Under anaerobic conditions, sulfates and organic sulfides are reduced to inorganic sulfide. In low pH or acidic conditions, odiferous hydrogen sulfide gas is generated. In the presence of air, the H₂S forms sulfuric acid which can cause severe corrosion in the collection system. The rate of H₂S generation and/or accumulation depends on the type and concentration of sulfides, the slope of the pipe and velocity of flow, and the surface area of the air/water interface. Turbulence in the sewer system (for example, at the point where the C Avenue line dropped into the 39th Street sewer line) generally causes local spikes in H₂S levels. Dry sewer traps in homes, or the lack of proper venting, may allow sewer gas to enter the structure.

Mr. Osbahr told us that when the plant began accepting wastewater on Friday, September 2, the influent pH measured in the DAF equalization tank dropped from around 8 to 3.9 within hours. To cause this, he suspected that one of the industries had to be discharging wastewater with a pH less than 2. He stated that the same thing happened again the following weekend. The low pH wastewater caused an upset in BOE's processes, ultimately leading to a souring of the digesters, according to Mr. Osbahr. Since the BOE facility started up in September, several workers and/or contractors have been hospitalized; at least one due to H₂S exposure.

The anaerobic conditions necessary for BOE's digesters to function properly also favor the reduction of sulfur-containing organic compounds to sulfides. Any hydrogen sulfide volatilized in the digesters is carried out with the methane to the flare. When BOE begins capturing the methane to sell, they plan to continue to flare off the H₂S. Eventually they plan to capture the H₂S in the form of a pelletized sulfur.

There are several other industries in South Sioux City with the potential to contribute sulfates and/or low-pH wastewater to the collection system. ADM Alliance Nutrition and Bimbo Bakeries discharge to the 39th Street gravity sewer, upstream (west) of the point where the C Avenue sewer flows into it.

South Sioux City Collection System Upgrades: As mentioned earlier, BOE stopped discharging wastewater on November 1. On November 2, a rubber plug was placed in the 36-inch gravity sewer along 39th Street just west of C Avenue to isolate the residential sewers from the wastewater and associated gases from the C Avenue sewer line. This diverted the sanitary wastewater (and industrial wastewater, including ADM and Bimbo Bakeries) north to the Foundry Lift Station. For residential lines along Bennet Avenue and along 39th Street downstream of the C Avenue sewer, the City is installing Tideflex valves to prevent the backflow of industrial wastewater.

Phase 1: On November 29, NDEQ issued a construction permit for a new 4400-foot long, 16-inch industrial force main to be installed alongside the existing gravity line from 39th and C Avenue to the Bennet lift station. The City purchased the pipe and BOE reimbursed them (approximately \$1 million) for the costs of construction. The force main is joined into the lift station wet well at the bottom to minimize the volatilization of H₂S. A temporary lift station was

installed just southeast of the intersection of G St. (C Avenue) and 39th Street to pump wastewater from the C Avenue gravity line into the new force main. A second plug was placed in the C Avenue sewer line just south of 39th Street to create a wet well to pump from. The City has had issues with these rubber plugs leaking and have replaced one of them at least once. The lift station, consisting of an 8-inch electric pump (capacity 3800 gpm) and emergency generator, went on line on December 13. A second pump, a 6-inch diesel pump (3000 gpm) was installed on December 20. Several days after BOE resumed discharging on January 4, one of the pumps froze. This was attributed to an interruption in flow from the BOE facility combined with extremely low ambient temperatures ($< 10^{\circ}\text{F}$). The pump was replaced, and thermal blankets have been placed around the pumps and piping to prevent freezing. The City was also planning to install heat tape and a pole building to protect the pumps. BOE agreed to avoid interruptions in flow without notifying the City first.

The City began injecting 50 gallons of hydrogen peroxide per hour into the sewer below the ADM facility on November 16. The dosing rates have since been reduced to around 10-15 gph. The line from Bimbo Bakeries was flushed on November 12. Elevated H_2S levels were reported in the sewer at 39th and Dakota Avenue on November 17-18 despite these efforts to isolate the residential lines from the Roth Industrial Park wastestreams. This line was being cleaned daily, according to recorded minutes from a November 22 meeting with the City and BOE, but the H_2S levels continued to spike at 50 to 100 ppm.

To mitigate odors at the Bennet Lift Station, BOE also hired a contractor to install a rubberized cover over the wet well. This was completed on December 15. Photo 5 shows the cover and two vents which have been equipped with activated carbon filters. They plan to install two more.

Now that the industrial force main along 39th Street has been completed and the industrial wastewater from the Roth Industrial Park no longer travels through the gravity lines, the plug has been removed from the 39th Street line. Wastewater from the residential areas and industries north of Highway 20 once again flows east by gravity to the Bennet Lift Station.

Phase 2: Plans are now being prepared for a new 16-inch force main to be constructed along C Avenue (parallel to the existing gravity line) to connect with the force main recently completed. The temporary lift station will then be removed and industrial wastewater will be pumped all the way from BOE'S existing lift station to the Bennet Lift Station. McClure Engineering, who designed the new force main along 39th Street, is preparing the plans. It is being funded by the City of South Sioux City with likely grant assistance from the Department of Commerce's Economic Development Agency. The existing effluent pumps at the BOE facility have the capacity to convey 3 MGD all the way to the Bennet Lift Station. Mr. Osbahr told me that, for the sake of efficiency, the pump impellers will be changed. During the week of this inspection, easements were being prepared for the project. State and Federal permits will be obtained to cross under Highway 20. Mr. Hedquist said that he expected construction to begin as early as March, weather permitting. On February 1, Mr. Osbahr said that he thought the project should be completed in June.

In a third phase being planned, an extension will be added to the new force main to route *around* the Bennet Lift Station. The industrial wastewater will then bypass the Bennet lift station and tie in to the force main downstream of the pumps. The City had been planning to install a biofilter at the Bennet lift station to control odors, which is similar to a system installed at the Riverlift Lift Station. Mr. Osbahr said that this may not be necessary if their wastewater is diverted

around the lift station, since it will never come into contact with air until it reaches the wet well at the Sioux City STP.

A new residential/commercial development just northeast of the Bennet Lift Station is in the design stages. Wastewater from the expected ~1000 new units will be conveyed to the Bennet Lift Station.

INSPECTION PROCEDURES

This inspection was requested by WENF after a number of odor complaints were received from area residents and news accounts reported problems at the facility. We contacted Ms. McCaslen the week before the inspection and arranged to meet her on Monday afternoon, January 9, 2017, at the Sioux City STP. We arrived at 4:30 pm and met with Ms. McCaslen and Mr. Maynes. We briefly discussed the Sioux City pretreatment and industrial monitoring program, the significant industrial users in South Sioux City, and the recent resumption of operations at the BOE facility.

The following morning, Mr. Tipton and I met Messrs. Christiansen, Johnson, Hedquist and Livermore at the South Sioux City City Hall. Immediately before we arrived, Mr. Hedquist was contacted by John Smith of the Region VII Air and Waste Management Division to inform him that a mobile unit was being deployed that morning from EPA Region V in Chicago, in cooperation with Region VII, to assess ambient H₂S in the vicinity of the BOE facility. He also announced that we would be arriving shortly to inspect the BOE facility and gather information about the City's and industry's efforts to mitigate these issues. We introduced ourselves, presented our credentials, and discussed the purpose and scope of our visit. After some discussion of the City's ongoing efforts, we sat in on the daily conference call between the City Administrator, the Public Works Director, McClure Engineering, and the Sioux City pretreatment manager. These meetings are being conducted every weekday morning at 10 a.m. BOE is normally represented at these meetings but Mr. Bradley was not in attendance.

Following the conference call, the four of us (Messrs. Christiansen and Johnson from NDEQ and Green and Tipton from EPA) proceeded to the BOE facility. We identified ourselves to the guard at the security gate and were waved through. We knocked on a door on the west side of the building and were admitted by a plant worker. After identifying ourselves, we were greeted by Messrs. Bradley, Osbahr, Ernest, and Winkler. We presented our credentials and outlined the purpose and scope of the inspection. Using the process flow diagram (Attachment 3), Mr. Osbahr described the plant processes and operation. He then escorted us through the plant. With his assistance, I collected a grab sample of the effluent from the DAF system.

On Wednesday, January 11, after meeting with Ms. McCaslen at the Sioux City STP to split effluent samples, we met Messrs. Christiansen and Johnson at the CHS industrial facility and conducted an industrial user inspection. The findings from that inspection are presented in a separate report. From there, we proceeded to the South Sioux City Public Works facility and met with Mr. Higgins. He escorted us to several points in the collection system, including the temporary lift station, the Bioxide injection site outside the BPI facility (no longer in use), the peroxide injection site near the ADM facility, the Bennet Lift Station, and the Foundry Lift Station. We returned to the BOE facility. Mr. Osbahr gave me a copy of the facility Storm Water Pollution Prevention Plan (SWPPP-Attachment 4), and pulled a grab sample of the effluent from the DAF for a visual inspection.

On Thursday, January 12, we met Ms. McCaslen at her office at the Sioux City STP and obtained another split sample of the BOE effluent from her. Mr. Tipton and I then returned to the BOE facility.

With Mr. Osbahr, we did a walk-through inspection of the property and storm water outfalls. I issued a Notice of Potential Permit Violations (NOPV-Attachment 5) for failure to conduct the required storm water site inspection, visual monitoring, and storm water sampling for the fourth quarter of 2016. We discussed the facility's rights with respect to confidentiality. Mr. Osbahr signed the Confidentiality Notice (Attachment 6) requesting that the process flow diagram be handled as confidential business information (CBI).

On January 31, I left a voicemail message for Mr. Osbahr with a few questions, and to get an update on the plant. He returned my call the following morning. Two days later, I received a copy of the NOPV response (which had already been submitted to CNSL with the §308 request response). I also contacted Ms. McCaslen for more information about the industrial sewer charges. She also forwarded slug loading reports she had recently received from CHS.

Sampling Procedures: I collected two 24-hour composite samples of the plant effluent from the effluent discharge pit on Tuesday and Wednesday, January 10 and 11. The samples were collected using the Isco Model 5800 flow-composited refrigerated automatic sampler (photo 12; property of BOE, programmed by Ms. McCaslen) and represented the wastewater discharged beginning and ending at midnight. Although I brought an EPA automatic sampler capable of collecting time-proportioned composite samples, installing it would have required either removing the steel plate from atop the discharge pit (photo 11) or drilling a hole in it. Either of these would have potentially exposed nearby plant workers to hydrogen sulfide gas which may have accumulated in the pit. I therefore elected to take a split of the samples collected by the City of Sioux City. Each morning, Ms. McCaslen retrieved the collection bottle and transported it to the Sioux City STP. We met her there and collected a split sample by thoroughly shaking the bottle before filling individual sample containers pre-labeled for analysis of the parameters BOD, COD, TSS, total Kjeldahl nitrogen (TKN), ammonia-nitrogen, and nitrate/nitrite. I measured the pH of the composite sample collected on Tuesday using a portable meter. It was 6.93, but the sample had been sitting for several hours in the refrigerator at the Sioux City STP. For purposes of reporting under a National Pollutant Discharge Elimination System [NPDES] Permit, pH values must be measured within 15 minutes of sample collection, since the pH may drift up or down over time. The sample collected on Wednesday did not represent the full 24 hours since power to the sampler was interrupted for several hours. The power was cut off in order to replace the universal power supply for the building.

On Tuesday, January 10, with Mr. Osbahr's assistance, I also collected a grab sample of the discharge from the dissolved air flotation (DAF) tank. Mr. Osbahr cautioned me that the effluent quality was not satisfactory and that the operators were working on optimizing the DAF chemistry. I measured the pH of the effluent at 6.83 using a portable meter. The next day, we pulled another grab sample for visual examination (photo 8). The effluent quality had improved dramatically, from a black, opaque, sludge-like appearance to a beer-like color and transparency.

When we returned to the plant on Thursday, January 12, the DAF was shut down. A consultant from US Water was conducting jar tests to optimize the DAF process and was waiting on a fitting he had ordered to repair the polymer feed system. When the DAF is shut down, incoming wastewater is collected in the DAF feed/equalization tank. If the tank overflows, the excess carries over to the discharge pit where the composite sampler and discharge pumps are located.

FINDINGS AND OBSERVATIONS

Attachment 7 contains photographs taken during the inspection. Attachment 8 is a completed Multimedia Screening Checklist completed for the facility. Attachment 9 is the laboratory report for the samples I collected.

1. Pretreatment Permit: BOE's industrial pretreatment permit (Attachment 10) was originally issued on May 1, 2016, and expires on January 13, 2020. The permit contains effluent discharge limits for pH only (5.0 – 11.5). It authorizes the City of Sioux City to impose wet weather flow curtailments and volumes/rate and time of day schedules for the facility's discharge.

Attachment 11 is the permit application submitted by BOE on June 6, 2015. The facility's Standard Industrial Code is 2869 – Resource Recovery and Manufacturer of Industrial Organic Chemicals. At the time of this inspection, Ms. McCaslen thought that the categorical standards for Centralized Waste Treatment Facilities (40 CFR 437, Subpart D) would apply to the BOE facility. Baseline monitoring had been started but not completed since the plant had been in operation for less than two months before shutting down. She said that ninety days of monitoring would be conducted before permit limits would be finalized for the facility, and these might include TSS limits. After consultation with Paul Marshall in Region VII/WWPD/WENF, it was determined that the facility was non-categorical. The permit was amended on January 31, 2017, to reflect this (Attachment 12).

The relationship between the Sioux City STP and the BOE facility is unique, Ms. McCaslen pointed out, since the facility is both a privately-owned wastewater treatment facility and an industrial user. Currently, both BOE and the industries discharging into it are permitted under Sioux City's pretreatment program. However, since Sioux City's capacity for future growth is limited by the capacity allocated to existing industrial users, the capacity allocated to BOE cannot *also* be allocated to the industries which discharge to it.

Effluent Monitoring: BOE's pretreatment permit only specifies monthly monitoring of pH, but Sioux City has additional monitoring requirements for industrial users discharging more than 25,000 gallons per day (gpd). These include weekly composite samples for BOD₅, TSS, total nitrogen (TN) and total phosphorus (TP), and weekly grab samples for fats, oils, and grease (FOG) and pH. Composite samples are currently being collected every day (when possible) by Ms. McCaslen in order to complete 90 days of baseline monitoring. The composite sampler (photo 12) is equipped with four large collection bottles, so four consecutive 24-hour composite samples can be collected before they must be retrieved. (This practice may result in the holding time for BOD [*@*40 CFR §136] being exceeded for some of the samples. However, the results are only used for the purpose of computing surcharges, not for compliance purposes; there are currently no permit limits for BOD or TSS.) The facility has allowed the City timely access to the sampler, according to Ms. McCaslen. Ms. McCaslen said that after the initial 90 days of monitoring, the City will continue to sample daily but may analyze samples selected at random (i.e., a different day each week) for BOD and TSS.

Recommendation: To better certify the integrity of the samples, the City of Sioux City should lock the sampler. A key could be provided to BOE with a custody seal so they could access the sampler when necessary, while documenting the circumstances and timing.

The effluent pit is not equipped with a pH probe, and there are no provisions for pH adjustment of the effluent. Plant staff do monitor the pH of the DAF effluent throughout the day and occasionally at a downstream sewer manhole (Attachment 18). The effluent pH is measured monthly by Sioux City when

they pick up the composite effluent samples.

2. Discharges from Contributing Industries: All three of the industries in the Roth Industrial Park have pretreatment permits issued by the City of Sioux City that expire on April 14, 2017. The permits were issued with effluent limits for pH and TSS, but the TSS limitations were waived in April 2015 because the Sioux City STP receives less than 80% of its treatment capacity for TSS. Effluent pH is restricted to within a range of 5.0 to 11.5.

CHS produces soy protein powder from defatted soy flakes. CHS discharges process wastewater (~0.4 MGD) to a gravity line where it is combined with their domestic wastewater and flows to the Roth Industrial Park Lift Station (which was constructed in 2007). The lift station then pumps it directly to BOE. BPI manufactures sausages and discharges approximately 0.7 MGD. Wastewater from BPI is pumped directly to the BOE facility. Richardson Milling (RMI) is a grain processor that produces granola. Wastewater from RMI (~0.01 MGD) flows by gravity to BPI's lift station and is pumped to BOE.

Both lines coming into the BOE plant have manual valves to divert them directly to the gravity sewer. The City of South Sioux City controls these valves. When the new force main to Bennet Lift Station has been completed, the gravity sewer will no longer be used. All of the flows from Roth Industrial Park will *have* to go through the BOE plant to their lift station, to be pumped through the force main.

Attachment 13 contains billing records for September through December for the contributing industries CHS, BPI, and RMI. Below are tabulated the average volumes and BOD and TSS concentrations for the three industries over the last four months. (Although the number of samples varied from month to month, I weighted every sample equally in calculating these averages.) I also computed average *loadings* (shown in italics) from the average volumes and concentrations:

<u>Industry</u>	<u>BOD_{avg.}</u>		<u>TSS_{avg.}</u>		<u>Flow_{avg.}</u> <u>(MGD)</u>
	<u>(mg/L)</u>	<u>(pounds/day)</u>	<u>(mg/L)</u>	<u>(pounds/day)</u>	
CHS	4,412	<i>14,608</i>	1,552	<i>5139</i>	0.397
BPI	471	<i>2860</i>	325	<i>1973</i>	0.728
<u>RMI</u>	<u>14,325</u>	<u><i>1242</i></u>	<u>1,020</u>	<u><i>88.5</i></u>	<u>0.0104</u>
Total (CHS+BPI+RMI)	1,976	<i>18,710</i>	760	<i>7201</i>	1.1354

Of the three industries contributing wastewater to BOE, BPI discharges the highest volumes, but CHS contributes significantly greater loading in pounds per day of BOD and TSS. RMI's wastewater has higher concentrations of BOD, but they discharge very low volumes. The combined wastewater from the three industries is not sampled or monitored, but I added up their average pollutant loadings to arrive at *hypothetical* average concentrations for the combined wastestreams (Total CHS+BPI+RMI).

3. Discharges from BOE: The corresponding billing records for BOE are in Attachment 14. The facility was only discharging from September 12 through October 31. The corresponding two-month averages were as follows:

<u>Industry</u>	<u>BOD_{avg.}</u>		<u>TSS_{avg.}</u>		<u>Flow_{avg.}</u> <u>(MGD)</u>
	<u>(mg/L)</u>	<u>(pounds/day)</u>	<u>(mg/L)</u>	<u>(pounds/day)</u>	
BOE	1,809	<i>15,872</i>	731	<i>6414</i>	1.052

Even though BOE'S effluent contained about 10% centrate (from the digester centrifuges) and a large volume of untreated wastewater (see discussion below), the average effluent concentrations were still slightly lower than those of the combined incoming wastewater.

BOE'S billing records for September and October list the daily volumes for two effluent wastestreams: "treated" and "untreated". "Treated" wastewater is industrial wastewater (with ~5-10% centrate mixed in) that has been treated through the DAF system, while "untreated" wastewater is overflow from the DAF equalization tank (not treated through the DAF system). The untreated wastestream is metered separately and combined with treated effluent in the discharge pit, where the effluent samples are collected. Most of the industrial wastewater discharged in September and October was *not* treated; 81.4%, on average (74% in September and 90% in October).

Based on information I gathered from Mr. Osbahr and Ms. McCaslen, there were two reasons for discharging *untreated* wastewater: 1) The operators experienced numerous problems with the DAF system over the first several months. When one or both sides of the DAF were shut down, incoming wastewater accumulates in the equalization tank. When the tank capacity is exceeded (>350,000 gallons), an overflow pipe conveys the excess to the discharge pit. 2) When the plant first started up, it was necessary to ramp up the DAF process gradually in order to avoid too sudden a decrease in the organic loading to the Sioux City STP. According to Ms. McCaslen, this could shock the biological organisms in the activated sludge process, especially in the fall when the plant was adjusting to falling temperatures.

Mr. Osbahr said that BOE'S goal is to treat 100% of the industrial wastewater through the DAF system. Since they resumed operations on January 4, they have treated nearly all of the wastewater they received. On February 2, Ms. McCaslen sent me the discharge volumes for the month of January (Attachment 15). They discharged for 26 of the next 27 days (an average of 1.307 MGD) and the equalization basin overflowed on only one day.

Since BOE was not discharging to the sewer in November and December, the billing statements for those months show charges for treatment of wastewater hauled by truck to the Sioux City STP. Between November 11 and December 31, they hauled, on average, 19 trucks per day (110,000 gpd), and as many as 31 trucks in a day, of centrate from the digester centrifuges. Every load was tested by the Sioux City lab for BOD and TSS. The hauled centrate had significantly higher average pollutant concentrations (BOD-3872 mg/L; TSS-6992 mg/L), but were only about one tenth of the volume of the wastewater discharged in September and October.

4. Discharges to BOE from CHS: CHS processes soy flakes to produce protein powder. The facility was built in 2008 and acquired by CHS in 2012. They discharge, on average, 0.4 MGD of wastewater to the city sewer. The protein product is isolated using centrifuges, which discharge wastewater with high starch content. Wastewater is also generated through clean-in-place (CIP) processes (approximately every 5 days), water softener backflush, boiler blowdown, and reverse osmosis reject water.

CHS' process wastewater is generally acidic (pH~5-5.5), while the CIP wastewater is alkaline. The wastewater is continuously pH-adjusted with caustic or hydrochloric acid in a 30,000-gallon tank at the southeast corner of the facility. It is then discharged to a gravity sewer leading to the Roth Lift Station. A pH probe mounted inside a "kidney loop" (see photo 17) controls the caustic and acid feed pumps. The set points programmed in to the automated system trigger the caustic pump if the pH falls to 5.5, and stop it when it reaches 6.0. The acid pump is triggered when the pH is between 9.7 and 9.2.

The City of South Sioux City collects sewer use fees from CHS, but they contract the City of Sioux City to conduct the monitoring and compute the user surcharge fees. Attachment 13 contains billing statements for September through January. Surcharges are applied to the excess TSS, BOD, and FOG discharged above domestic concentrations (300 mg/L, 250 mg/L, and 100 mg/L, respectively). A flow-proportioning composite sampler collects samples several times a week from the discharge pit. The samples are picked up by Ms. McCaslen and analyzed at the Sioux City STP laboratory. CHS reports the average hourly effluent pH.

Until April 2015, CHS' pretreatment permit had a TSS limit of 700 ppd. This was exceeded nearly every month (Attachment 16). According to Ms. McCaslen, the previous owner (Solbar USA) was put on a compliance schedule to reduce their solids discharges, and this was transferred to CHS when they took ownership of the plant.

Comparing CHS' effluent with the total combined wastewaters discharged by CHS, BPI, and RMI, the CHS facility contributed 35% of the hydraulic loading, 78% of the BOD, and 71% of the TSS sent to BOE.

Tank Dumps: Ms. McCaslen forwarded to me nine emails she received from CHS since last August, reporting slug loads or releases of noncompliant wastewater. (The last two were reported *after* this inspection.) The reports are also sent to BOE. The issue on January 29 was a faulty hydrochloric acid pump which resulted in the discharge of approximately 8000 gallons per hour of alkaline wastewater for about 13 hours. The other eight incidents were tank dumps. These resulted in slug loads of about 900 pounds of solids, on average, to the sewer. Although this represents only about 12% of the amount of solids typically discharged every day, the discharge of concentrated slugs can shock biological wastewater treatment systems.

Recommendation: CHS should always notify the City and BOE facility in advance before dumping any concentrated wastewater to the sewer. They should also consider installing a holding tank with enough capacity to hold such wastes and discharge them slowly in order to prevent slug loading of BOE's treatment processes.

Effluent pH: Mr. Osbahr reported that BOE had received acidic wastewater on numerous occasions and that they had caused problems with BOE's processes. The first time this happened was shortly after the initial startup on September 2. Mr. Osbahr said that the influent pH dropped from around 8 to 3.9 in a few hours, and that it happened again the following weekend. He suspected that one of the industries had been discharging wastewater with a pH as low as 2. He told me that the DAF automatically shuts down if the pH drops below 5.0. Over the following weeks, BOE's digesters became upset and the methanogenesis process was ultimately halted. Mr. Osbahr attributed the plant upset to the low pH wastewater (although the mechanism for this upset process was not entirely clear to me.) CHS was the suspected source of these acid slugs, since BPI, the other possible source, has extremely tight control over their effluent pH and never discharge low pH (even though a lower pH would profit them by boosting the amount of grease they could recover in their DAF). Mr. Osbahr said that incoming wastewater with extremely low pH levels had been observed on numerous occasions and again last week. When we walked through the plant on Tuesday, a pH readout panel on the wastewater equalization tank indicated a pH of 6.4, well within the permitted range. Between the discharge pit at CHS and the wastewater equalization tank at the BOE facility, there are no monitoring ports or probes. By the time CHS' wastewater reaches the pH probe in BOE's DAF equalization tank, they have a limited ability to adjust it. If the pH is too low, Mr. Osbahr told us, they can add sodium bicarbonate (a weak base) to the equalization tank to bring the pH up. If the pH is *very* low, they would need to move a

crane into the area in order to handle the large amounts of bicarbonate required to neutralize it.

During our inspection at the CHS facility, I asked Mr. Oehler to provide a copy of their hourly effluent pH records for December, when the last pH excursion was reported. The next week, I received a copy of the hourly discharge pH records for December and January (through Jan. 12, 2017). The recorded pH values ranged from 2.04 to 12.53. Ten percent of the hourly pH values were outside the range of 5.0 - 9.5. These readings are from the pH probe in the kidney loop for the neutralization system. The pH is not measured at the point where the effluent is discharged to the sewer, except once per month when the City of Sioux City collects a grab sample.

Mr. MacClure attributed the low pH discharges in December to a problem with the kidney loop on the pH neutralization system. The wastewater in the loop had frozen solid, preventing the water from flowing past the pH probe. To remedy this, insulation was installed around the pipe (photo 17).

The cause of the high pH wastewaters in mid-December through early January was not discussed.

After this inspection, Ms. McCaslen forwarded me another report from CHS. On January 29, their hydrochloric acid pump failed and high pH wastewater was discharged for 13 hours.

The City's monthly effluent pH measurements have not indicated a violation since 2012. The data for December and January provided by CHS paint a different picture, however, with frequent excursions outside the permitted pH range. And since these data are hourly averages, they smooth out any shorter-term fluctuations and may under-report the number and magnitude of pH swings. It should also be noted that, since pH values are not actual concentrations, the mean or average pH is not a meaningful statistic. The pH probe in the neutralization system is monitored through the plant-wide SCADA (supervisory control and data acquisition) system. There are no alarms for high or low pH, but, according to Mr. MacClure, the SCADA screens are closely monitored by plant staff. Nevertheless, CHS staff do not appear to have adequate control over the pH of the wastewater they discharge.

On occasion, CHS has bypassed their pH neutralization system. It happens when the equalization tank is filled to capacity and overflows. These overflows discharge directly to the sewer. Mr. MacClure said that CHS is considering adding a backup pump to prevent overflows if a pump goes down.

Recommendations: Between CHS and BOE, there must be an agreement about how to better monitor and/or control the pH of wastewater leaving the CHS facility and/or entering the BOE facility. Mr. Osbahr said that they are currently looking at installing a dosing tank at the point where wastewater enters the BOE plant, with a pH probe and caustic feed. If this option is pursued, the City must also be on board, since the transport of corrosive wastewaters to BOE could adversely impact their collection system and violates the sewer use ordinance.

CHS should upgrade its pretreatment system to provide better effluent pH control. Complete loss of pH control has occurred on multiple occasions due to pump or pH probe failures which were not corrected for days. CHS should consider installing redundant systems. They should also monitor the pH of their wastewater downstream of the neutralization tank, e.g., at the point where it is discharged to the sewer. They should install an alarm to notify operators when the pH is out of the control range. They should also consider installing a larger neutralization tank and/or an additional tank where high or low-pH wastewater can be diverted and held until it is fully neutralized.

5. Discharges to BOE from BPI & RMI: I asked Ms. McCaslen about the compliance record of the other two permitted industries contributing wastewater to BOE. She said that BPI has a large capacity, well-operated DAF system. She said that except for one or two exceedances for fats, oil and grease (FOG) in the last 10 years, the facility has had a good compliance record. RMI also has a good compliance record, after having significantly reduced their discharges of suspended solids in accordance with a compliance schedule.

6. Sulfide/H₂S Monitoring by BOE: Attachment 18 is a log sheet used to record hourly total and dissolved sulfide concentrations in the DAF effluent and a downstream manhole in the collection system. Included are all of the sheets generated since the previous Wednesday evening when the plant was started up. Twenty-nine samples of the DAF effluent were analyzed for sulfides over 6 days (17 work shifts). Concentrations up to 3 mg/L of total sulfides were reported right after startup, but they were generally ≤ 0.3 mg/L since then. On some shifts, the effluent was monitored almost every hour, while on others, not at all. Some sulfide measurements (18) were also made at a downstream manhole ("Dakota City"), with concentrations as high as "5.5+" mg/L, but they generally declined to ≤ 0.3 mg/L over the next few days. Effluent pH levels were very stable and generally close to 7 (6.16 to 7.2) at the discharge point and downstream manhole.

Mr. Osbahr said that the ferric chloride used in the DAF system removes sulfides from the wastewater in the form of ferrous sulfate. There were also more than twenty 300-gallon totes on hand in the plant containing 50% hydrogen peroxide solution. These were on hand for dosing the effluent, as necessary, to control hydrogen sulfide generation in the collection system. After this inspection, Mr. Osbahr told me that these containers had been relocated to the Roth Lift Station to be used there, if needed.

Mr. Osbahr also showed me a log sheet which was used by plant staff to monitor odors and H₂S gas in the surrounding area and in the collection system between the plant and the Bennet Lift Station. Attachment 17 is a copy of the log sheets completed during the overnight shift ending at 6 a.m. on January 10. The accompanying map shows the route followed and five locations to be checked. The log sheet shows four of these locations were checked four times during the night shift on January 9-10. On two occasions, sulfide levels were checked in the sewer (.3 ppm, 0.7 ppm) and corresponding H₂S levels were estimated (0.12 & 0.19; units not specified). No H₂S readings were taken. Odor was reported once at the downstream manhole on Dakota Avenue.

During the walk-through inspection on January 10, we experienced some mild discomfort from the odor inside the plant. A dosimeter being worn by one of the workers registered an H₂S level of 0.5 ppm. The OSHA Permissible Exposure Limit is 10 ppm. Mr. Osbahr said that they had some electronic issues with the ozonation system meant to mitigate odors inside the plant. Large portable fans had been brought in but were not being used at the time. When I spoke with him by phone on February 1, he said that a new 1500 cfm passive air scrubbing system had been installed. The air is passed through a biofilter before it is discharged.

I asked Mr. Livermore if there were any SSOs reported in South Sioux City's collection system. He said that they had reported one at the BPI lift station. The pump controls had malfunctioned, resulting in a discharge to the adjacent ditch. The controls were subsequently upgraded and an autodialer was installed, he said.

7. Other Inspection Observations: On November 2, BOE ceased processing of industrial wastewater for 62 days. We arrived on the sixth day after they had resumed processing. The DAF system was up and running. The next day (Wednesday), only one side was running and on Thursday, the DAF was

completely shut down. A consultant from US Water was on site conducting jar tests and adjusting the operating parameters. On Wednesday, the DAF effluent appeared much better than it had on Tuesday (photo 8). The consultant said that he had switched to a different polymer which performed better and would reduce the amount of ferric chloride used. He was waiting for parts to arrive to make necessary modifications to the chemical feed system.

The digesters were producing methane gas at about 40% of capacity on Wednesday when we inspected the plant. At full capacity, it is expected to generate around 1 million cubic feet of gas per day and 30-40 wet tons of sludge.

Mr. Osbahr said that the consultant from US Water is on site 2 days a week and is training BOE employees to do the jar tests and monitor DAF operations. The availability of qualified operators is critical for the safe and effective operation of the DAF and digesters, especially in light of their potential environmental impacts on the surrounding community. Mr. Osbahr was on site throughout this inspection and answered all of our questions about facility operation, design, and capacity. He lives in Des Moines (a 3-hour drive) and also oversees three other industrial energy production facilities in Iowa. He is at the BOE facility 3 to 4 days a week, he said. Mr. Winkler was on site but did not participate in the discussions.

Ms. McCaslen noted that since BOE resumed their wastewater processing last week, the Sioux City STP had been adjusting to the resulting reduction in food/microorganism (F/M) ratio in their activated sludge process.

Every tank has probes to continuously monitor pH and temperature. The probes were last calibrated on Thursday, December 5, according to Mr. Osbahr. There are also several turbidity meters throughout the plant, including on the DAF effluent. He said that these were not reading accurately, however, and were in need of re-calibration.

8. EPA Sample Results: Following are the pollutant concentrations reported by the Region 7 Science and Technology Center laboratory for the three samples collected during this inspection (units=mg/L):

<u>Parameter</u>	<u>Sample 1 (grab)</u> <u>DAF Effluent; 01/10/17</u>	<u>Sample 2 (composite)</u> <u>Effluent Pit; 01/10/17</u>	<u>Sample 3 (composite)</u> <u>Effluent Pit; 01/11/17</u>
BOD	1970	2380	2380
COD	3590	4420	4320
TSS	697	813	564
TKN	410	456	337
Ammonia-N	278	300	212
Nitrate/nitrite-N	.229	.063	.132
pH	6.83	-	6.93

The volume of wastewater discharged on January 10 was 1.65 MGD and the plant was on pace to treat the same volume the following day. The composite samples (samples 2 and 3) had BOD and TSS concentrations similar to those being reported in September and October before BOE stopped accepting, treating, and discharging industrial wastewater.

I contacted Ms. McCaslen on January 27 for an update on the status of the BOE facility. She said that the last sample of their effluent was fairly clear in appearance and had no detectable sulfides. She also provided me with effluent sample results for January (included in Attachment 14). Effluent TSS and

BOD levels are similar to those being reported in September and October before the DAF was shut down.

9. Storm Water Pollution Prevention Plan: BOE's Notice of Intent was received on June 20, 2016, and acknowledged on July 26, 2016. Nebraska's current storm water general permit (NER910000) was issued by NDEQ on July 18, 2016, and expires on June 30, 2021. Attachment 4 is a copy of the SWPPP given to me by Mr. Osbahr on January 11. He did not have a signed copy of the SWPPP and some of the information in it was out of date. For example, neither of the two individuals listed as responsible for implementing and overseeing the storm water program are currently employed by BOE. Mr. Osbahr said that the SWPPP is currently being revised by their contract engineer (McMahon Engineers and Architects) and that Mr. Winkler, the plant manager, is currently in charge of SWPPP implementation.

The permit requires quarterly benchmark monitoring of storm water discharges for at least the first four quarters of operation. The BOE facility is required to monitor for TSS, COD, and ammonia. Since BOE has been in operation since September 2, benchmark monitoring should have been done sometime during the fourth quarter of 2016. The permit also requires quarterly site storm water inspections. There were no records of any storm water inspections being conducted. I issued a Notice of Potential Permit Violations for these deficiencies (Attachment 5).

When we inspected the area surrounding the plant, we observed frozen puddles of an unidentified dark-colored liquid along the edge of the paved drive approaching the bay where waste tankers unload on the north side of the plant. On February 1, Mr. Osbahr told me that the liquid had been cleaned up. Mr. Osbahr told us that all the drains in the building lead to the 300,000-gallon equalization basin that feeds the DAF system. Any spills that occur would be contained. No area drains were observed on the property outside the building.

On February 2, I received, from BOE's attorney, a copy of a response letter from Mr. Osbahr, which had already been submitted to CNSL with their §308 request response. On February 7, I received additional documents, including new forms for documenting facility/site inspections, spills, and quarterly visual assessments, along with NDEQ's Storm Event Monitoring Report Form. The NOPV response and related documents are in Attachment 19.

10. Discharges from Other Industries to South Sioux City's Collection System: Several other industries are located in South Sioux City and discharge to the collection system. Discharges of BOD, FOG, sulfates, and/or low-pH effluent from these industries could potentially generate H₂S in South Sioux City's gravity sewers. Attachment 16 is a list of industries given to us by Ms. McCaslen. We briefly discussed each of these.

ADM Alliance Nutrition manufactures molasses licks for livestock and discharges 7,000 to 20,000 gpd. The Sioux City pretreatment program sampled their wastewater in November 2013 and July 2016. The results of the sample analyses are included in Attachment 16. BOD concentrations ranged from 3000 to 8000 mg/L; TSS from 500 to ~8000 mg/L; FOG from 44 to 115 mg/L; and pH from 5.8 to 8.5. For comparison, a sample of raw molasses was also collected and analyzed (TSS = 303,000 mg/L and BOD = 135,000 mg/L). Since mid-November, the City has been dosing the sewer just downstream of ADM with hydrogen peroxide (5000-gallon tank-photo 1).

Bimbo Bakeries is a wholesale bakery and has a pretreatment permit issued by Sioux City. They discharge approximately 15,000 gpd of industrial wastewater. Ms. McCaslen's records (Attachment 16) show that they discharged wastewater with a pH below 5 during two months in 2012, but have been in

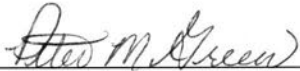
compliance for the last 4 years.

Both ADM and Bimbo Bakeries have oil/water separators which are regularly maintained as reported by Sioux City's FOG coordinator. Historically, wastewater from these two industries had flowed north in a gravity line to the Foundry Lift Station. In July, they were re-routed into the gravity line flowing east along 39th Street. In November, when the rubber plug was installed in that line, the industrial flows were again diverted north with the residential flows. After construction of the new industrial force main, the plug was removed and these flows have returned to their original route east through the 39th Street gravity line.

Flatwater Metals is a metal finishing facility. Ms. McCaslen said that they had returned a sewer use survey and she was planning a site visit in the next few weeks. Barto Trucking and Sioux Plating are permitted by the Sioux City pretreatment program. Their discharges are conveyed north to the Riverlift Lift Station and are not connected to the collection system for the Bennet Lift Station. There is a truck wash north of the Tyson facility. The wash-water is treated in an onsite lagoon and they do not discharge to the city sewer.

CONCLUSIONS

1. Although the plant manager, Perry Winkler, was present during this inspection, all of the information in this report was provided by Jason Osbahr, the plant engineer. Mr. Osbahr's knowledge of the facility is extensive, but he resides ~3 hours away and is responsible for three other energy plants in the state of Iowa. Since the plant started up, staff turnover has been significant. BOE must ensure that the plant is staffed and supervised around the clock by competent personnel trained to respond to plant upsets or any other exigencies.
2. Repeated slugs of industrial wastewater with extremely low pH levels were received in September and probably contributed to the plant upset at BOE and subsequent sulfide and odor issues. Effluent controls at CHS are not adequate to maintain effluent pH between 5.0 and 9.5, as required by South Sioux City's sewer use ordinance. CHS and BOE should work together to address the issue of acidic/alkaline wastewater either at CHS' discharge point and/or at the BOE facility. To comply with the City's ordinance, CHS should upgrade their effluent pretreatment system by providing redundant controls, better monitoring, and/or greater equalization capacity to contain tank dumps and/or wastewater with low or high pH.
3. CHS', BPI's and RMI's pretreatment permits issued by the City of Sioux City expire in April 2017. By that time, the City of South Sioux City must put agreements in place with these industries to ensure their discharges are compatible with BOE and the Sioux City STP. There are several open questions and issues remaining to be worked out, such as BOE's treatment capacity and confidentiality agreements between the industries.
4. BOE is permitted under Nebraska's general storm water permit but failed to conduct the required quarterly storm water inspection and benchmark monitoring in the fourth quarter of 2016. A Notice of Potential Permit Violations was issued. BOE indicated, in their response, that the Storm Water Pollution Prevention Plan is being updated and the required monitoring would be started this quarter.
5. Effluent samples collected from the BOE facility during this inspection had pollutant concentrations consistent with monitoring results reported by the City of Sioux City over recent months.

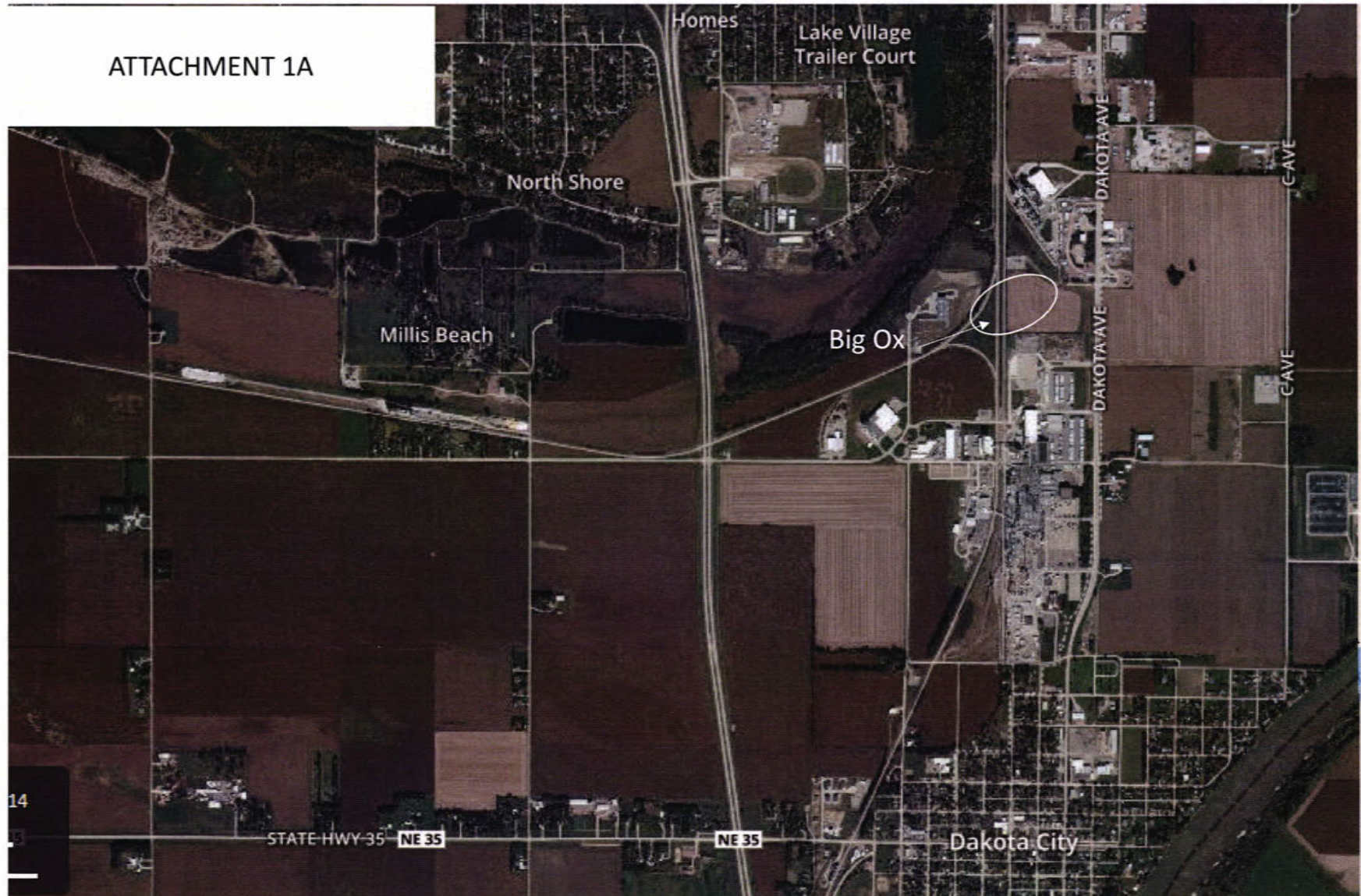


Peter M. Green
Environmental Scientist
Activity Number: WGP424
Date: February 18, 2017

Attachments:

1. Maps/aerial photos of South Sioux City Collection System and Big Ox Facility (4 pages)
2. Pretreatment Permits (issued by Sioux City, Iowa) for CHS, BPI, RMI, ADM, and Bimbo Bakeries (8 pages)
3. Big Ox Energy Process Flow Diagrams (2 pages; 8½" x 11" and 11' x 17") (These documents were claimed as Confidential Business Information and are being stored in Region VII's CBI repository)
4. Big Ox Energy Storm Water Pollution Prevention Plan (26 pages) and Attached Nebraska General Storm Water Permit (43 pages)
5. Notice of Potential Permit Violations (1 page)
6. Signed Confidentiality Statement (1 page)
7. Photos Taken During Inspection, with Captions (20 pages)
8. Region VII Multimedia Screening Checklist (2 pages)
9. Transmittal of Sample Analysis Results; Region VII Science & Technology Center Laboratory (6 pages)
10. Pretreatment Permit (issued by Sioux City, Iowa) for Big Ox Energy (6 pages)
11. Pretreatment Permit Application for Big Ox Energy (June 8, 2015) (9 pages)
12. Amended Pretreatment Permit for Big Ox Energy (7 pages)
13. Industrial Wastewater Monthly Billing Spreadsheets; CHS, BPI, & RMI; September 2016 through January 2017 (15 pages)
14. Industrial Wastewater Monthly Billing Spreadsheets; Big Ox Energy; September 2016 through January 2017 (6 pages)
15. January Flow Records for Big Ox Energy (2 pages)
16. South Sioux City Industry Contacts, Compliance History, and ADM Sample Results (4 pages)
17. Big Ox Energy Shift "Rounds" Log Sheets for January 9-10, 2017, with Map of Route (5 pages)
18. Big Ox Energy Shift Log Sheets for January 5-10, 2017; Effluent Sulfides & H₂S (8 pages)
19. Big Ox Energy Response to NOPV (received February 2&7, 2017) (19 pages)

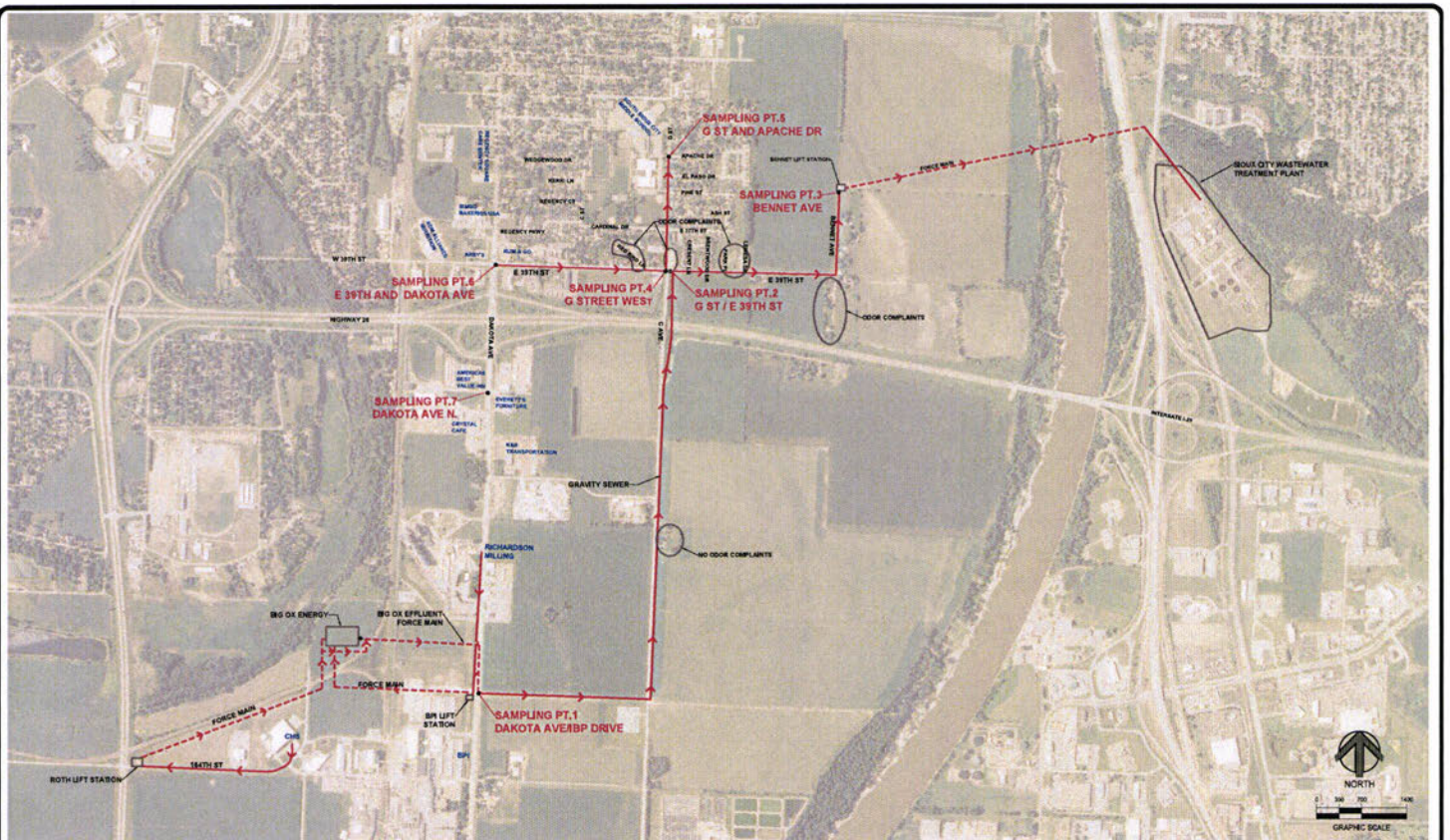
ATTACHMENT 1A





ATTACHMENT 1C
Big Ox Energy Facility
South Sioux City, NE





SOUTH SIOUX CITY SAMPLING LOCATIONS



McCLURE
ENGINEERING CO.

**Significant Industrial User Wastewater Discharge Permit****SIOUX CITY, IA
UTILITIES DEPARTMENT**Permit Number 2014-19-I

In accordance with the provisions of City Codified Ordinance Chapter 13.10.03 Permittee:

CHS Inc.(Formerly Solbar USA)

Firm

395 164th St.

Location Address

South Sioux City, NE 68776

City, State, Zip Code

Is hereby authorized to discharge process wastewater from the above identified facility to the City of Sioux City sanitary sewer system in accordance with the conditions set forth in this permit and said ordinance. Compliance with this permit does not relieve the permittee of its obligation to comply with all applicable regulations, standards, or requirements under Local, State and Federal laws, including such laws that may become effective during the term of this permit.

Noncompliance with any term or condition of this permit shall constitute a violation of the City of Sioux City Sewer Use Ordinance and therefore be subject to the penalties ascribed in Chapter 13.08.06 in the City Ordinance.

General Information:Date of Issue: April 14, 2014Expiration Date: April 13, 2017Renewal Application Date: January 14, 2017Standard Industrial Classification Code: 2075-Soybean oil mill/soybean protein isolate**Effluent Discharge Limitations:**

Parameter	Daily Maximum	Monthly Average shall not exceed
TSS	N/A	700 lbs/day
pH	5.0-11.5 s.u	5.0-11.5 s.u.

The Permit has been issued based on the information provided on your Permit Application and/or surveillance by Utilities representatives. A new discharge permit may be required if the characteristics of the water indicated on this permit change.

A renewal permit application must be submitted no later than 90 days prior to the above expiration date, if permittee wishes to continue discharging after said date.

By: Darin McCaslinIssued this 14th of April 2014
Day Month Year



Significant Industrial User Wastewater Discharge Permit

SIOUX CITY, IA
UTILITIES DEPARTMENT

Permit Number 2014-03-I

In accordance with the provisions of City Codified Ordinance Chapter 13.10.03 Permittee:

Beef Products Inc. (BPI)

Firm

360 164th Street

Location Address

South Sioux City, NE 68776

City, State, Zip Code

Is hereby authorized to discharge process wastewater from the above identified facility to the City of Sioux City sanitary sewer system in accordance with the conditions set forth in this permit and said ordinance. Compliance with this permit does not relieve the permittee of its obligation to comply with all applicable regulations, standards, or requirements under Local, State and Federal laws, including such laws that may become effective during the term of this permit.

Noncompliance with any term or condition of this permit shall constitute a violation of the City of Sioux City Sewer Use Ordinance and therefore be subject to the penalties ascribed in Chapter 13.08.06 in the City Ordinance.

General Information:Date of Issue: April 14, 2014Expiration Date: April 13, 2017Renewal Application Date: January 14, 2017Standard Industrial Classification Code: 2013-Sausages and other prepared meats**Effluent Discharge Limitations:**

Parameter	Daily Maximum	Monthly Average shall not exceed
TSS	N/A	4150 lbs/day
pH	5.0-11.5 s.u	5.0-11.5 s.u.

The Permit has been issued based on the information provided on your Permit Application and/or surveillance by Utilities representatives. A new discharge permit may be required if the characteristics of the water indicated on this permit change.

A renewal permit application must be submitted no later than 90 days prior to the above expiration date, if permittee wishes to continue discharging after said date.

By: Darius McEwenIssued this 14th of April 2014
Day Month Year



Significant Industrial User Wastewater Discharge Permit

SIOUX CITY, IA
UTILITIES DEPARTMENT

Permit Number 2014-06-I

In accordance with the provisions of City Codified Ordinance Chapter 13.10.03 Permittee:

Richardson Milling

(Formerly 21st Century Grain/Viterra)

Firm

5005 Dakota Avenue

Location Address

South Sioux City, NE 68776

City, State, Zip Code

Is hereby authorized to discharge process wastewater from the above identified facility to the City of Sioux City sanitary sewer system in accordance with the conditions set forth in this permit and said ordinance. Compliance with this permit does not relieve the permittee of its obligation to comply with all applicable regulations, standards, or requirements under Local, State and Federal laws, including such laws that may become effective during the term of this permit.

Noncompliance with any term or condition of this permit shall constitute a violation of the City of Sioux City Sewer Use Ordinance and therefore be subject to the penalties ascribed in Chapter 13.08.06 in the City Ordinance.

General Information:Date of Issue: April 14, 2014Expiration Date: April 13, 2017Renewal Application Date: January 14, 2017Standard Industrial Classification Code: 2043-Cereal Breakfast Food**Effluent Discharge Limitations:**

Parameter	Daily Maximum	Monthly Average shall not exceed
TSS	N/A	315 lbs/day
pH	5.0-11.5 s.u	5.0-11.5 s.u.

The Permit has been issued based on the information provided on your Permit Application and/or surveillance by Utilities representatives. A new discharge permit may be required if the characteristics of the water indicated on this permit change.

A renewal permit application must be submitted no later than 90 days prior to the above expiration date, if permittee wishes to continue discharging after said date.

By: Darin McLeanIssued this 14th of April 2014
Day Month Year



Significant Industrial User Wastewater Discharge Permit
SIOUX CITY, IA
UTILITIES DEPARTMENT

Permit Number 2014-16-I

In accordance with the provisions of City Codified Ordinance Chapter 13.10.03 Permittee:

Bimbo Bakeries, USA, Inc.
(Formerly EarthGrain Baking Company/Sara Lee)
Firm
3723 Dakota Avenue
Location Address
South Sioux City, NE 68776
City, State, Zip Code

Is hereby authorized to discharge process wastewater from the above identified facility to the City of Sioux City sanitary sewer system in accordance with the conditions set forth in this permit and said ordinance. Compliance with this permit does not relieve the permittee of its obligation to comply with all applicable regulations, standards, or requirements under Local, State and Federal laws, including such laws that may become effective during the term of this permit.

Noncompliance with any term or condition of this permit shall constitute a violation of the City of Sioux City Sewer Use Ordinance and therefore be subject to the penalties ascribed in Chapter 13.08.06 in the City Ordinance.

General Information:Date of Issue: April 14, 2014Expiration Date: April 13, 2017Renewal Application Date: January 14, 2017Standard Industrial Classification Code: 2051-Bread and other bakery products**Effluent Discharge Limitations:**

Parameter	Daily Maximum	Monthly Average shall not exceed
TSS	N/A	197 lbs/day
pH	5.0-11.5 s.u	5.0-11.5 s.u.

The Permit has been issued based on the information provided on your Permit Application and/or surveillance by Utilities representatives. A new discharge permit may be required if the characteristics of the water indicated on this permit change.

A renewal permit application must be submitted no later than 90 days prior to the above expiration date, if permittee wishes to continue discharging after said date.

By: Desiree McCaslinIssued this 14th of April 2014
Day Month Year

Engineering Report

Storm Water Pollution Prevention Plan (SWPPP) For Industrial Storm Water General Permit

Prepared For



RENEWABLE NATURAL GAS FACILITY
SOUTH SIOUX CITY, NEBRASKA

JUNE 2016

McM. No. BI076-950180

DEG:

McMAHON
ENGINEERS ARCHITECTS

1445 MCMAHON DRIVE P.O. BOX 1025
NEENAH, WI 54956 54957-1025
PH. 920.751.4200 FX. 920.751.4284

**STORM WATER POLLUTION
PREVENTION PLAN**
Industrial Storm Water General Permit

For
Renewable Natural Gas Facility
South Sioux City, NE

Prepared For
Big Ox Energy

Prepared By
McMahon
Neenah, Wisconsin
June 16, 2016
McM. No. B1076-950180

Table of Contents

1. Overview	3
1.1 Introduction	3
1.2 Goals & Objectives	4
2. Stormwater Pollution Prevention Team	5
3. Site Description	5
3.1 Activities at the Facility	5
3.2 General Location Map.....	7
3.3 Site Map Showing the Following.....	7
3.3.1 Site & Drainage Map.....	7
4. Summary of Potential Pollutant Sources.....	8
4.1 Activities in the Area.....	8
4.2 Pollutants.....	8
4.3 Spills and Leaks	9
4.4 Non-Stormwater Discharges	9
4.5 Salt Storage	10

4.6 Sampling Data	10
5. Description of Control Measures	10
6. Schedules and Procedures	13
6.1 Pertaining to Control Measures Used to Comply with the Effluent Limits	13
6.1.1 Good Housekeeping	13
6.1.2 Preventive Maintenance	13
6.1.3 Spill Prevention and Response Procedures	14
6.1.4 Employee Training	14
6.2 Pertaining to Monitoring and Inspection.....	15
6.2.1 Routine Facility Inspections	16
6.2.2 Quarterly Visual Assessment of Stormwater Discharges.....	16
6.2.3 Annual Comprehensive Site Inspections.....	17
7. Certification Statement.....	18
Appendix A - Industrial Storm Water Storm Event Monitoring Report	
Appendix B – Nebraska State Historical Society Records	

STORM WATER POLLUTION PREVENTION PLAN

Industrial Storm Water General Permit

For
Renewable Natural Gas Facility
South Sioux City, NE

Prepared For
Big Ox Energy

Prepared By
McMahon
Neenah, Wisconsin
June 16, 2016
McM. No. B1076-950180

1. Overview

1.1 Introduction

This Stormwater Pollution Prevention Plan (SWPPP) covers the operations at the Big Ox Energy Renewable Natural Gas Facility in South Sioux City, Nebraska. The SWPPP has been developed as required under the National Pollutant Discharge Elimination System (NPDES), the general permit NER900000 for stormwater discharges from industrial activity to waters of the State of Nebraska, and in accordance with good engineering practices. This SWPPP describes the facility and its operations, identifies potential sources of stormwater pollution at the facility, recommends appropriate Best Management Practices (BMPs) or pollution control measures to reduce the discharge of pollutants in stormwater runoff, and provides for periodic review of this SWPPP. General facility information is provided as follows.

Facility Name: Big Ox Energy Siouxland
(BOES)

Facility Address: 1616 D Avenue
Dakota City, NE 68731

Facility Contact Person: Matt Cole, VP of Engineering
6601 County Road R
Denmark, WI 54208
Telephone: 920-863-3043
Fax: 920-863-5546
Email: mcole@bigoxenergy.com

Facility Owner & Operator: Big Ox Energy, Inc.

NPDES Permit Information:
Standard Industrial Classification Code: 2869
*Industrial Organic Chemicals,
Not Elsewhere Classified*

Receiving Municipal Storm Sewer System: South Sioux City

1.2 Goals & Objectives

The primary goal of the stormwater permit program is to improve the quality of surface waters by reducing the amount of pollutants potentially contained in the stormwater runoff that originates from this facility. Industrial facilities with coverage under a general stormwater NPDES permit for stormwater discharge to waters of the state of Nebraska must prepare and implement a SWPPP for their facility.

The SWPPP will:

- Identify potential sources of stormwater and non-stormwater contamination of the stormwater drainage system.
- Identify and prescribe appropriate “source area control” type best management practices designed to prevent stormwater contamination from occurring;
- Identify and prescribe “stormwater treatment” best management practices to reduce pollutants in contaminated stormwater prior to discharge;

- Prescribe actions needed to remove non-stormwater discharges not included in the allowable non-stormwater discharges as stated in the NPDES permit from the storm drainage system.
- Prescribe an implementation schedule to ensure that the stormwater management actions prescribed in the Stormwater Pollution Prevention Plan are carried out and evaluated on a regular basis.

2. Stormwater Pollution Prevention Team

The Stormwater Pollution Prevention Team is responsible for developing, implementing, evaluating, maintaining, and revising this SWPPP. The members of the Team are familiar with the management and operations of the quarries owned by Big Ox Energy. Matt Cole is the facility's contact person and has primary responsibility for the SWPPP, including: development, implementation, evaluation, maintenance, and revision. The members of the Team and their responsibilities are as follows:

Name & Title	Responsibilities
Ron Harnack	Inspections, testing, evaluations, employee training, management decisions, maintains & revises SWPPP, general contact person.
Ron Harnack	Record keeping, filing & office work, permit certifications, submitting reports.
Matt Cole	Organizing company-wide operations, work crews, quarterly monitoring activities, maintenance practices, foreman responsibilities.

3. Site Description

3.1 Activities at the Facility

The BOES facility processes wastewater and organic wastes from surrounding industries. The majority of wastewater is delivered to the facility through three forcemains. The wastewater is treated through a Dissolved Air Floatation (DAF) process and discharged through a forcemain to the municipal sanitary sewer. Solids removed from the DAF process and high strength hauled-in wastes are processed through an anaerobic digestion system. The biogas produced from the digestion process is scrubbed, compressed and injected into the natural gas pipeline. Resultant solids are dewatered and hauled-out as dewatered cake. The

BOES facility operates throughout the year, 24-hours a day and 7 days per week. The facility consists of the following major unit components:

- Receiving Pits and Receiving Tank
- Turbo Separator
- Equalization/Mixing Tank
- Two Anaerobic Digesters
- Two Dewatering Centrifuges
- DAF Feeding Tank
- DAF Unit
- Biogas Cleanup Skid
- Waste Gas Burner

The process is described in more detail below based on liquid processing, solid waste processing and the biogas system.

- Liquid Processing

The wastewater from three forcemains is collected in the Dissolved Air Flotation (DAF) Feed Tank. The wastewater from the DAF feed tank is transferred to the DAF unit. The solids from the DAF unit are sent to the Equalization/Mixing Tank. The effluent wastewater from the DAF unit is sent to the sanitary sewer.

- Waste Processing

Hauled-in high strength wastes are unloaded in the receiving area into two hoppers or receiving pits. The waste flows to a Receiving Tank. Hauled-in packaged and canned food waste is also delivered to the facility at the truck loading dock. The packaged solid waste is unloaded into a Turbo Separator. The Turbo Separator separates the organic waste from the packaging material. The organic waste is sent to the Receiving Tank and the packaging waste is sent out for disposal.

The waste in the Receiving Tank is pumped to the Mixing Tank. From the Mixing Tank, the contents are transferred through a heat exchanger to Digester 1. From Digester 1, the contents are transferred to Digester 2. From Digester 2, the contents are sent to the digester effluent tank prior to dewatering.

Two centrifuges are used to dewater the solids. The centrate from the centrifuges is sent to the DAF Feed Tank and the solids from the centrifuges will be removed from the site as a dewatered cake.

▪ **Biogas System**

The biogas from Digester 1 and Digester 2 is sent to a Biogas Cleanup Skid outside of the building to be scrubbed and injected into the natural gas pipeline. In the event the biogas cleanup skid is out of service, the biogas will be disposed of through a waste gas burner.

3.2 General Location Map

The facility is located north of Dakota City, Nebraska. Figure 1 shows a general location map of the facility.

3.3 Site Map Showing the Following

3.3.1 Site & Drainage Map

Figure 2 shows a Site and Drainage Map for the Big Ox Energy Siouxland Renewable Natural Gas Facility. The Site and Drainage Map contain the following features as required by the permit:

- Size of the property in acres
- The location and extent of significant structures and impervious surfaces
- Directions of stormwater flow
- Locations of all structural control measures
- Locations of all stormwater conveyances including ditches, pipes, and swales
- Locations of potential pollutant sources
- Locations of all stormwater monitoring points
- Loading/unloading areas
- Locations used for the treatment, storage, or disposal of wastes
- Liquid storage tanks
- Processing and storage areas
- Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility
- Machinery

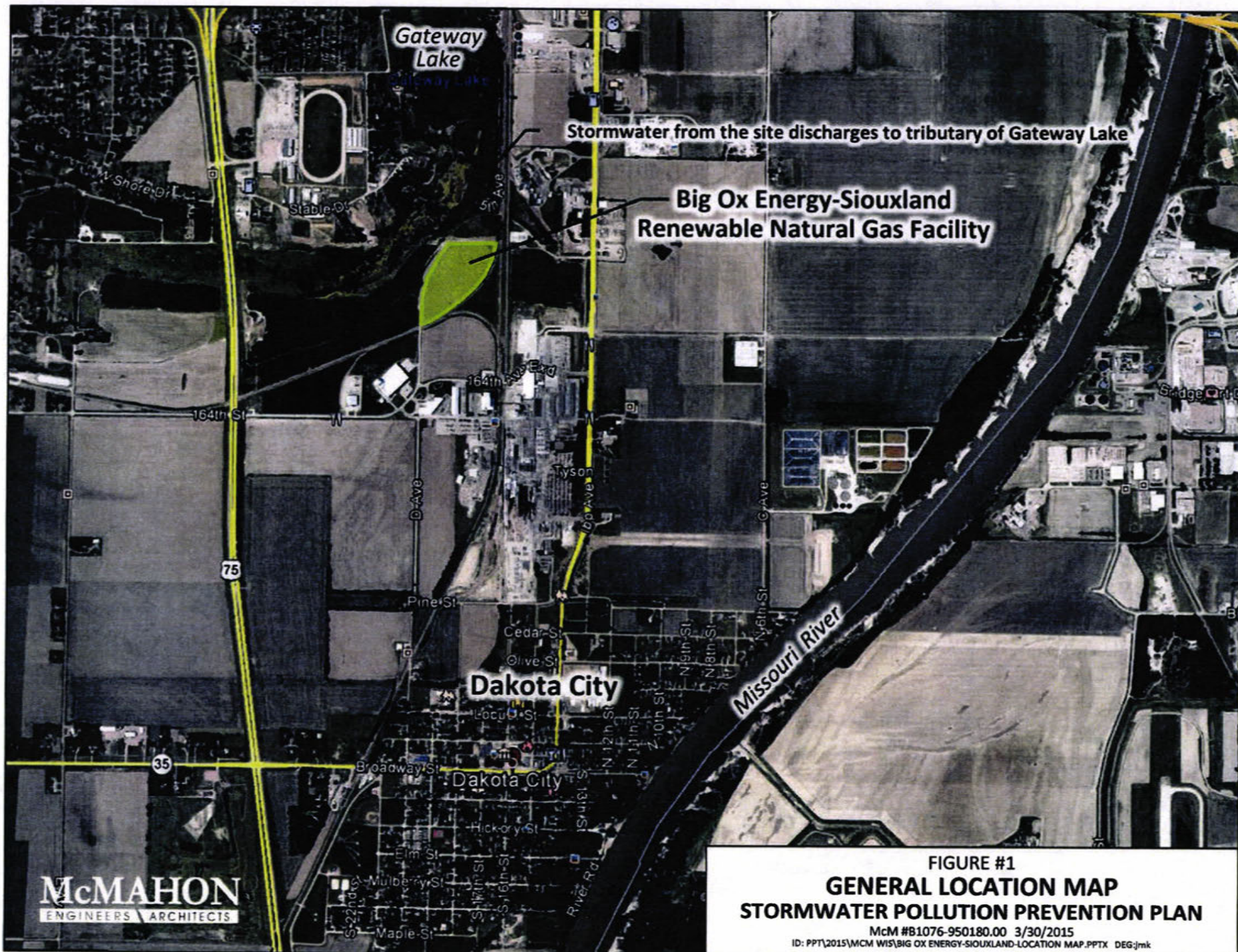


FIGURE #1
GENERAL LOCATION MAP
STORMWATER POLLUTION PREVENTION PLAN

MCM #B1076-950180.00 3/30/2015
ID: PPT\2015\MCM WIS\BIG OX ENERGY-SIOUXLAND-LOCATION MAP.PPTX DEG:jmk

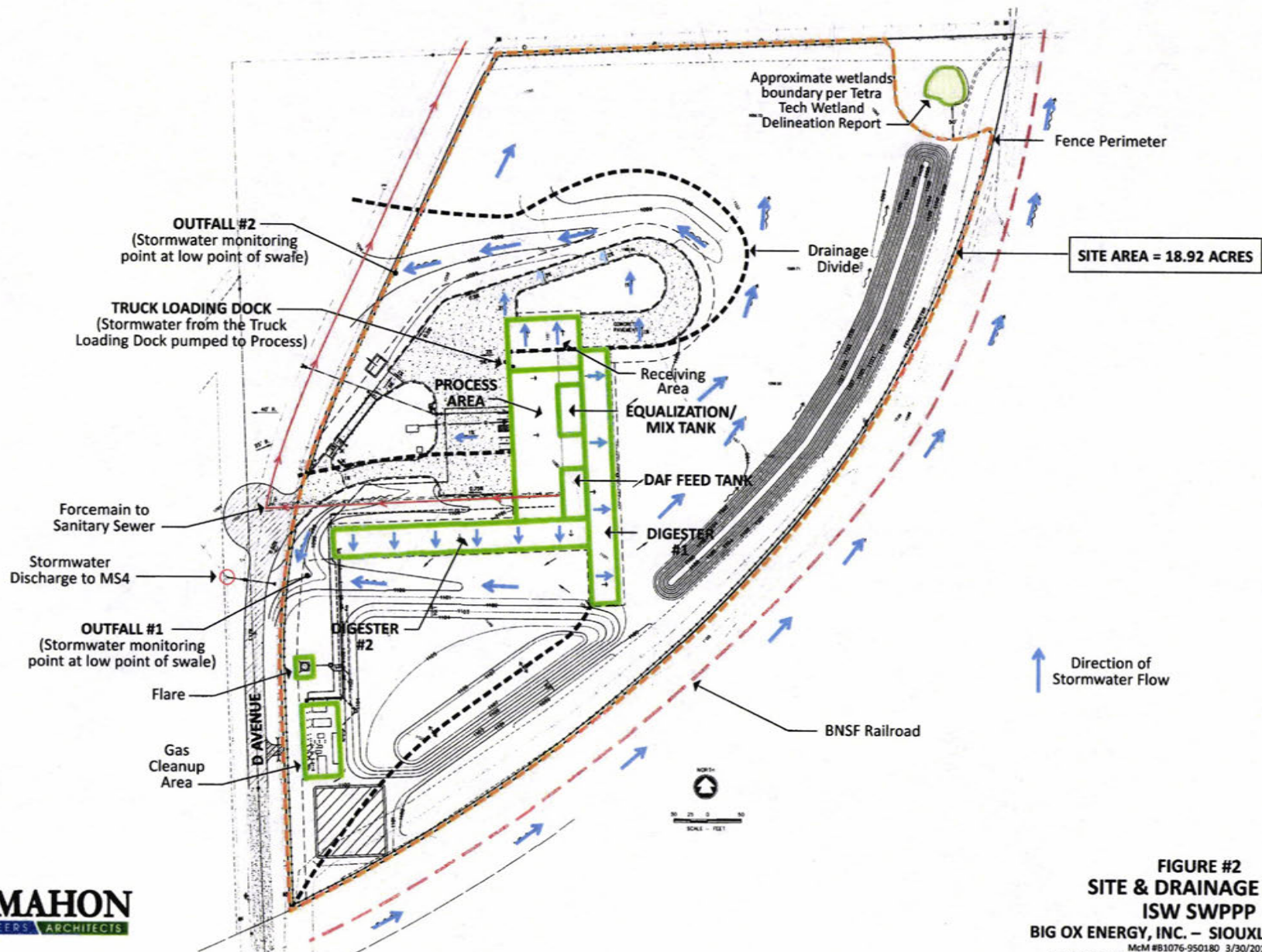


FIGURE #2
SITE & DRAINAGE MAP
ISW SWPPP
BIG OX ENERGY, INC. - SIOUXLAND PROJECT
McM #B1076-950180 3/30/2015
ID: PPT\2015\MCM WIS\BIG OX ENERGY-SIOUXLAND-PROCESS FLOW DIAGRAM.PPTX DEG/jmk

4. Summary of Potential Pollutant Sources

The following have been identified as potential sources of stormwater contamination.

- Unloading areas of hauled-in high strength wastes
- Transportation areas of hauled-in high strength wastes
- Ferric chloride unloading area;
- Areas on site that can experience significant soil erosion;
- Any other areas capable of contaminating stormwater runoff;

4.1 Activities in the Area

The following have been identified as activities that are exposed to stormwater on the site.

- Ferric Chloride Storage and Unloading Area
- Biogas Cleanup Skid
- Truck Loading Dock Area
- Waste Gas Burner

Other site activities are located within the building.

4.2 Pollutants

The following have been identified as potential stormwater pollutants.

Material	Physical Description	Stormwater Pollutant
Cleaning Solvents (stored inside facility)	Colorless, blue, yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates
Coagulant (stored outside facility)	Brown liquid	Ferric Chloride
Polymer - Anionic (stored inside facility)	-	-
Polymer - Cationic (stored inside facility)	-	-
Sulfuric Acid (stored inside facility)	Clear to Amber	Sulfuric Acid
Caustic (stored inside facility)	White Liquid	Sodium Hydroxide
Asphalt	Black solid	Oil, petroleum distillates
Concrete	White to grey solid	Limestone, sand
Debris / litter	Various colored solids	Solids

4.3 Spills and Leaks

The following have been identified as areas where potential spills and leaks could occur that could contribute pollutants to stormwater discharges.

Area	Material
Receiving Area (inside of building)	Hauled-in high strength waste
Loading Dock	Hauled-in packaged waste; Loading of dried and bagged solids from facility
Ferric Chloride Storage and Unloading Area (outside of building)	Ferric Chloride

4.4 Non-Stormwater Discharges

All stormwater outfalls shall be inspected and evaluated for non-stormwater discharges into the storm drainage system for the duration of this permit. Any monitoring shall be representative of non-stormwater discharges from the facility. Any unauthorized non-stormwater discharges must be eliminated, or covered under another NPDES permit. The following is a list of non-stormwater discharges or flows that are not considered illicit (unless identified as a significant contamination source):

- Water line flushing
- Uncontaminated groundwater infiltration
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Lawn watering
- Street wash water
- Firefighting

Non-stormwater discharge inspections shall take place during dry weather periods, and may include either end of pipe screening (Method A) or detailed testing of the storm sewer collection system (Method B). One of the following monitoring methods is acceptable:

- A. Method A: End of pipe screening shall consist of visual observations made at least twice per year at each outfall of the storm sewer collection system. Observations shall be made when non-stormwater discharges from the facility are considered most likely to occur. Instances of dry weather flow, color, odor, clarity, floatable, foam, stains, sludge, or other indications of a non-stormwater discharge shall be recorded.
- B. Method B: A detailed testing of storm sewer collection system may be performed. Acceptable testing methods include dye testing, smoke testing, or video camera observation. A re-test shall be done every 5 years or a lesser period as deemed necessary.

Documentation of non-stormwater discharges shall include the date of the evaluation, a description of the evaluation criteria used, a list of the outfalls or onsite drainage points that were directly observed during the evaluation, the different types of non-stormwater discharges and source locations, and the actions taken, such as a list of control measures used to eliminate unauthorized discharges, if any were identified.

If outfalls cannot be evaluated for non-stormwater discharges, Matt Cole of Big Ox Energy shall sign a statement certifying an inability to comply with this requirement, and include a copy of the statement in the SWPPP. In this case, the SWPPP shall be submitted to the department.

4.5 Salt Storage

Salt used for deicing is stored inside the facility.

4.6 Sampling Data

No stormwater sampling data or other chemical testing that characterizes the quality of stormwater discharge is currently available for the facility.

5. Description of Control Measures

Structural control measures may be necessary to control pollutants that are still present in the stormwater after the source area controls (non-structural controls) have been implemented. Structural controls are physical features that control and prevent stormwater pollution from entering receiving waters. They can range from preventive measures to collection structures to treatment systems. Structural controls require construction of a physical feature or barrier.

- *Preventive Measures*

Preventive measures are controls that are intended to prevent the exposure of stormwater to contamination. The following preventive measures have been chosen for this facility.

Area	Material/Equipment	Control Measure
External Mechanical Systems	Safety posts / bollards	Prevent chemical leaks, hauled-in high strength waste spills
Site	Locked chain link fence	Site security
Building	Locked doors	Building security

- *Diversions*

Diversion practices are structures (including grading and paving) that are used to divert stormwater away from high risk areas and prevent contaminants from mixing with the runoff, or to channel contaminated stormwater to a treatment facility or containment area. The following areas are to be protected through the use of diversion structures.

Area	Control Measure
Roof Runoff	Roof is sloped away from doors and loading dock
Swales	Two swales on site direct stormwater off the property to the west side of the site

- *Containment*

Containment areas are structures designed to hold pollutants or contaminated stormwater to prevent it from being discharged to surface waters. These structures can range from drip pans to large containment areas. Containment structures have been installed in the following areas.

Area	Material	Control Measure
Receiving Area (inside of building)	Hauled-in high strength waste	Receiving area located within building
Process Area (inside of building)	Hauled-in high strength waste, hauled-in packaged waste	Solid and liquid handling process located within building
Loading Dock	Hauled-in packaged waste	Drain is installed by the loading dock. Liquid entering the drain is sent to a pit prior to being pumped to the Receiving Tank
Vehicle parking , loading, unloading and conveyance areas on site	Oil, grease, & other vehicle fluids	Drip pan, waste fluid storage container
Ferric Chloride Storage and Unloading Area (outside of building)	Ferric Chloride	Double-wall tank

▪ *Other Controls*

There are other control measures that can be used that may not fit into one of the previously mentioned categories. The use of such controls is encouraged. The following additional controls are used at the facility.

Area	Material	Control Measure
Dumpster receptacles (inside building)	Non-recyclable materials	Reduce, reuse, and recycle materials
Trash receptacles (inside building)	Recyclable Material	Reduce, reuse, and recycle materials

After implementation of the non-structural controls, no significant / unusual pollutants are anticipated to be present in runoff. There are no existing municipal or private stormwater ponds or stormwater facilities that serve the watershed in which the Big Ox Energy Siouxland site is located.

6. Schedules and Procedures

6.1 Pertaining to Control Measures Used to Comply with the Effluent Limits

6.1.1 Good Housekeeping

Good housekeeping practices are designed to maintain a clean and orderly work environment. This will reduce the potential for significant materials to come in contact with stormwater. The following practices are included in our good housekeeping routine.

Area/Equipment	Tasks	Frequency
Receiving area (inside of building)	Sweep floors / Clean / Place trash/waste in tightly sealed containers (ex.: garbage bins)	On average, once every 1 to 7 days
Ferric Chloride Unloading Area (outside of building)	Mechanically sweep pavement surfaces	On average, once every 1 to 7 days
Process Equipment (including Truck Scale, Turbo Separator, DAF, Grinders, and Centrifuges)	Blow off equipment and inspect for mechanical deficiencies	On average, once every 1 to 7 days
Truck Scale (outside of building)	Mechanically sweep truck scale surface	On average, once every 2 to 4 weeks
Gas Cleanup Pad (outside of building)	Sweep pad surface; Clean off equipment	On average, once every 2 to 4 weeks
Office, Custodial, and Lavatory Areas	Pick-up area / Organize work area / Clean	On average, once every 2 to 4 weeks
MCC Area	Pick-up area/ Clean	On average, once every 2 to 4 weeks
Storage Area	Maintain accurate material inventory	On average, once every 1 to 3 months

6.1.2 Preventive Maintenance

Preventive Maintenance involves the regular inspection, testing, and cleaning of facility equipment and operational systems. These inspections will help uncover conditions that might lead to a release of materials. Thus, allowing for maintenance will help prevent such a release. The following equipment/activities will be included in the preventive maintenance program.

Equipment	Tasks	Frequency
Process Equipment (including Turbo Separator, DAF, Grinders, Centrifuges, Biogas Cleanup Skid, Waste Gas Burner, and Heat Exchanger)	Inspect for Mechanical Deficiencies	Once every week
Electrical Components (including MCC's, SCADA system, panels, etc.)	Inspect for Electrical Deficiencies and Communication Faults	Once every week
Electric Actuated Valves	Inspect for Operation Faults	Once every week
MSDS Records	Review and update	Twice per year
Process Instrumentation	Inspect for Monitoring Malfunctions	Once every week

6.1.3 Spill Prevention and Response Procedures

Spills and leaks together are the largest industrial source of stormwater pollution. Thus, this SWPPP specifies material handling procedures and storage requirements for significant materials. Equipment and procedures necessary for cleaning up spills and preventing the spilled materials from being discharged have also been identified. All employees have been made aware of the proper procedures. The following procedures have been developed for spill response at our facility.

Area	Materials Present	Response Plan
Ferric Chloride Storage and Unloading Area (outside of building)	Ferric Chloride	Procedures outlined during employee training program
Process Area (inside of building)	Polymer, Antifoam, Nutrients, Sulfuric Acid, Caustic and Lime	Procedures outlined during employee training program

6.1.4 Employee Training

Employee training helps reduce stormwater contamination. The more knowledgeable all employees are about the facility's SWPPP and what is expected of them, the greater the chance that the plan will be successful.

The following is a description of the employee training programs to be implemented to inform appropriate personnel at all levels of the various SWPPP goals, SWPPP components, and responsibility.

Topic	Employees Included	Frequency
Good housekeeping practices	Manufacturing worker, maintenance worker, office workers, and truck drivers	New employees or as needed for specific job
Preventative maintenance practices	Manufacturing worker, maintenance worker, office workers, and truck drivers	New employees or as needed for specific job
Spill prevention and response procedures	Manufacturing worker, maintenance worker, office workers, and truck drivers	New employees or as needed for specific job
Waste minimization and proper disposal	Manufacturing worker, maintenance worker, office workers, and truck drivers	New employees or as needed for specific job

6.2 Pertaining to Monitoring and Inspection

The facility shall do the following analytical monitoring, required by the permit.

- Quarterly Benchmark Monitoring

NOTE: The following benchmarks apply to the facility as part of the Standard Industrial Classification (SIC) code 2869 sector-specific requirements:

Parameter	Benchmark Monitoring Concentration
Total Suspended Solids (TSS)	100 mg/l
Chemical Oxygen Demand (COD)	120 mg/l
Ammonia	10 mg/l

- Impaired Waters Monitoring
- Other Monitoring as Required by the NDEQ

For each type of monitoring the SWPPP shall document the locations where the samples are collected, the parameters for sampling and the frequency of sampling for each parameter, the schedules for monitoring periods for climates with irregular stormwater runoff, any numeric control values applicable to discharges from each outfall and procedures for gather the storm event data. Refer to

Appendix A for a copy of the Industrial Storm Water Storm Event Monitoring Report.

6.2.1 Routine Facility Inspections

Ron Harnack of Big Ox Energy, shall conduct routine inspections of all areas of the facility where industrial materials or activities are exposed to stormwater, and of all stormwater control measures used to comply with the effluent limits contained in the permit. The routine inspections shall be conducted at least quarterly when the facility is in operation. The documentation shall include the following:

- The inspection date and time
- The name(s), title(s) and signature(s) of the inspector(s);
- Weather information and a description of any discharges occurring at the time of the inspection;
- Any previous unidentified discharges of pollutants from the site;
- Any control measures needing maintenance or repairs;
- Any failed control measures that need replacement;
- Any incidents of noncompliance observed;
- Any additional control measures needed to comply with the permit requirements

Documentation shall be maintained on-site with a copy of the SWPPP.

6.2.2 Quarterly Visual Assessment of Stormwater Discharges

Ron Harnack of Big Ox Energy, shall collect a stormwater sample from each outfall (outfall 1 and outfall 2 on the SWPPP-1 plan sheet) and conduct a visual assessment of each of the samples once each quarter for the entire permit term. The visual assessment shall be made of a sample in a clean, clear glass, or plastic container, examined in a well-lit area, collected within the first 30 minutes of an actual discharge from a storm event and on storm event discharges that occur at least 72 hours (3 days) from the previous discharge. In the event of a snowmelt, the samples shall be taken during a period with a measurable discharge from the site.

The samples shall be visually inspected for color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution. The documentation shall include the following:

- Sample location(s)

- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Probable sources of any observed stormwater contamination;
- If applicable, why it was not possible to take samples within the first 30 minutes.

Documentation shall be maintained on-site with a copy of the SWPPP.

6.2.3 Annual Comprehensive Site Inspections

Matt Cole of Big Ox Energy, shall make an annual inspection to evaluate the effectiveness of the SWPPP. The inspection shall cover all areas of the facility affected by the requirements in the permit, including the areas identified in the SWPPP as potential pollutant sources where industrial materials or activities are exposed to stormwater, any areas where control measures are used to comply with the effluent limits contained in the permit, and areas where spills and leaks have occurred in the past 3 years. The documentation shall include the following:

- The inspection date and time
- The name(s), title(s) and signature(s) of the inspector(s);
- Findings from the examination of areas of the facility
- All observations relating to the implementation of the control measures including:
 - Previously unidentified discharges from the site
 - Previously unidentified pollutants in existing discharges
 - Evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of an around the outfall, including flow dissipation measures to prevent scouring
 - Additional control measures needed to address any conditions requiring corrective action identified during the inspection
- Any required revisions to the SWPPP resulting from the inspection
- Any incidents of noncompliance observed or a certification stating the facility is in compliance with the permit
- A statement, signed and certified in accordance with the permit

Documentation shall be maintained on-site with a copy of the SWPPP.

7. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


(Signature of Authorized Representative)

(Date)

(Printed Name)

(Title)

Appendix A - Industrial Storm Water Storm Event Monitoring Report

Form Approved 1/10/2011	Nebraska Department of Environmental Quality Industrial Storm Water – Storm Event Monitoring Report (ISW – SEMR)	
A. Permit Tracking Number: <u>NER _____</u>		
B. Facility Information		
1. Facility Name: _____		
2. Facility Location Address:		
a. Street: _____		
b. City: _____ c. State: _____ d. zip code: _____ - _____		
3. Additional Facility Information (Optional)		
Contact Name: _____ Phone: _____ - _____ - _____ Ext. _____		
E-mail (optional): _____		
4. ISW – SEMR Preparer (Complete if ISW – SEMR was prepared by someone other than the person signing the certification section)		
Prepared by: _____		
Organization: _____		
Phone: _____ - _____ - _____ Ext. _____		
E-mail (optional): _____		
C. Discharge Information		
1. Identify Monitoring Period:		
<input type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input type="checkbox"/> Quarter 4 (October 1 – December 31)		
<input type="checkbox"/> Check here if proposing alternative monitoring periods due to semi-arid climate, or freezing conditions		
<input type="checkbox"/> Quarter 1: From ____/____ To ____/____ <input type="checkbox"/> Quarter 2: From ____/____ To ____/____ <input type="checkbox"/> Quarter 3: From ____/____ To ____/____ <input type="checkbox"/> Quarter 4: From ____/____ To ____/____		
2.a. Are you required to monitor for any hardness dependent metals (cadmium, copper, chromium, lead, nickel, silver, zinc)? <input type="checkbox"/> YES <input type="checkbox"/> NO		
2.b. If so, what is the hardness of the receiving water? _____ mg/L		
D. Outfall Information		
1. How many outfalls are identified in the SWPPP? _____ List the identification code (name, 'SW-outfall 1') for each outfall in the table below.		
2. Do any of the outfalls discharge substantially identical effluents? <input type="checkbox"/> YES <input type="checkbox"/> NO		
3. If yes, for each monitored outfall, indicate outfall names that are substantially identical in the table below.		
3.a. Monitored Outfall Name*	3.b. Substantially Identical Outfalls (list those determined to be substantially identical to outfall identified in 3.a.)	3.c. No Discharge?
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

*Reference attachment if additional space is needed to complete the table.

[illegible]

Appendix B – Nebraska State Historical Society Records

B1576 - 950120.00



27 April 2015

Dawn Goeser
Project Engineer
McMahon Associates
330243 McMahon Drive
PO Box 1025
Neenah, WI 54957-1025

RE: HP# 1504-158-01; Big Ox Energy Siouxland Renewable Gas Facility, Dakota County

Dear Ms. Goeser:

Thank you for submitting the information and maps for the above referenced project for SHPO review and comment according to 54 U.S.C. 306108 (formerly Section 106 of the National Historic Preservation Act of 1966, as amended) and implementing regulations at 36 CFR Part 800.

According to the information that you provided along with a check of NESHPO records, I believe that the proposed construction of a renewable gas facility is unlikely to impact any cultural resources listed on or eligible for listing on the National Register. The area for this development was thoroughly surface surveyed in 2009 as part of a proposed industrial park development. No historic properties were found during that survey and I see no reason to think that this situation has changed. I believe that a determination of *no historic properties affected* is appropriate for this undertaking.

Please be advised that this opinion does not necessarily reflect that of any Native American Tribes that might have an interest in the area nor does it touch upon Traditional Cultural Properties, if they exist in the area. Also, there is always the possibility that buried or otherwise obscured cultural or human remains might be discovered in the project area. If such a discovery occurs, please contact this office immediately.

Should you have any questions, please do not hesitate to call this office at 402-471-2609 or by email at phil.geib@nebraska.gov

Sincerely,

A handwritten signature in blue ink, appearing to read "Phil R. Geib".

Phil R. Geib
Preservation Archaeologist

1500 R Street
PO Box 82554
Lincoln, NE 68501-2554
p: (800) 833-6747
(402) 471-3270
f: (402) 471-3100
www.nebraskahistory.org



Pete Ricketts
Governor

STATE OF NEBRASKA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Jim Macy

Director

Suite 400, The Atrium

1200 'N' Street

P.O. Box 98922

Lincoln, Nebraska 68509-8922

Phone (402) 471-2186

FAX (402) 471-2909

website: <http://deq.ne.gov>

**Authorization to Discharge Under the
National Pollutant Discharge Elimination System (NPDES)
General NPDES Permit Number NER910000
for Storm Water Discharges
From Industrial Activity to Waters of the State of Nebraska**

This NPDES general permit is issued in compliance with the provisions of the Federal Water Pollution Control Act (33 U.S.C. Secs. 1251 *et. seq.* as amended to date), the Nebraska Environmental Protection Act (Neb. Rev. Stat. Secs. 81-1501 *et. seq.* as amended to date), and the Rules and Regulations promulgated pursuant to these Acts. Application may be made under this general permit for authorization to discharge Storm Water from industrial activity. Owners or Operators issued a discharge authorization under this general permit are required to comply with the limits, requirements, prohibitions, and conditions set forth herein. The issuance of a discharge authorization under this general permit does not relieve Permittees of other duties and responsibilities under the Nebraska Environmental Protection Act, as amended, or established by regulations promulgated pursuant thereto.

NPDES Permit Number: **NER910000**

This permit shall become effective on **July 18, 2016**.

This permit and the authorization to discharge shall expire at midnight, **June 30, 2021**.

Pursuant to a Delegation Memorandum dated April 4, 2016, and signed by the Director, the undersigned hereby executes this document on behalf of the Director.

Signed this 18 day of July, 2016



Kevin Stoner
Water Permits Division Administrator



Table of Contents

1.	Coverage under this Permit.	5
1.1	Eligibility.	5
1.1.1	Facilities Covered.	5
1.1.2	Allowable Stormwater Discharges.	5
1.1.3	Allowable Non-Stormwater Discharges.	6
1.1.4	Limitations on Coverage.	6
1.2	Permit Compliance.	8
1.3	Authorization under this Permit.	9
1.3.1	How to Obtain Authorization.	9
1.3.2	Continuation of this Permit.	9
1.4	Terminating Coverage.	10
1.4.1	Submitting a Notice of Termination.	10
1.4.2	When to Submit a Notice of Termination.	10
1.5	Conditional Exclusion for No Exposure.	10
1.6	Alternative Permits.	10
1.6.1	NDEQ Requiring Coverage under an Alternative Permit.	10
1.6.2	Permittee Requesting Coverage under an Alternative Permit.	11
1.7	General Conditions.	11
1.7.1	Severability.	11
1.7.2	Permit Attachments.	11
1.7.3	Information Available.	11
1.7.4	Penalties.	11
1.8	Conditions Applicable to Portable Facilities.	11
1.8.1	Notification Requirements for Relocation of Portable Facilities.	11
1.8.2	Site Specific Discharge Authorizations, Denials and Revocations for Portable Facilities.	12
1.8.3	Operational Changes Relative to Facility Portability.	12
1.8.4	Exceptions for Portable Facilities.	12
1.8.5	Monitoring.	13
1.8.6	Site Closure Requirements.	13
2.	Control Measures and Effluent Limits.	13
2.1	Control Measures.	13
2.1.1	Control Measure Selection and Design Considerations.	14
2.1.2	Non-Numeric Technology-Based Effluent Limits.	14
2.1.3	Numeric Effluent Limitations Based on Effluent Limitations Guidelines.	16
2.2	Water Quality-Based Effluent Limitations.	17
2.2.1	Water Quality Standards.	17
2.2.2	Discharges to Water Quality Impaired Waters.	17
2.2.3	State Resource Water –Class B Antidegradation Requirements for New or Increased Dischargers.	17
2.3	Requirements Relating to Endangered Species and Historic Properties.	18
3.	Corrective Actions.	18
3.1	Conditions Requiring Review and Revision to Eliminate Problem.	18
3.2	Conditions Requiring Review to Determine if Modifications Are Necessary.	18
3.3	Corrective Action Deadlines.	18
3.4	Corrective Action Report.	19
3.5	Effect of Corrective Action.	19
3.6	Substantially Identical Outfalls.	19
4.	Inspections.	19
4.1	Routine Facility Inspections.	19

4.1.1	Routine Facility Inspection Procedures.....	19
4.1.2	Routine Facility Inspection Documentation.....	20
4.1.3	Exceptions to Routine Facility Inspections.....	20
4.2	Quarterly Visual Assessment of Stormwater Discharges.....	21
4.2.1	Quarterly Visual Assessment Procedures.....	21
4.2.2	Quarterly Visual Assessment Documentation.....	21
4.2.3	Exceptions to and Timing of Quarterly Visual Assessments.....	22
4.3	Comprehensive Site Inspections.....	22
4.3.1	Comprehensive Site Inspection Procedures.....	22
4.3.2	Comprehensive Site Inspection Documentation.....	23
5.	Stormwater Pollution Prevention Plan (SWPPP).....	24
5.1	Contents of Your SWPPP.....	24
5.1.1	Stormwater Pollution Prevention Team.....	24
5.1.2	Site Description.....	24
5.1.3	Summary of Potential Pollutant Sources.....	25
5.1.4	Description of Control Measures.....	26
5.1.5	Schedules and Procedures.....	26
5.1.6	Documentation to Support Eligibility Considerations Under Other Federal Laws.....	28
5.1.7	Signature Requirements.....	28
5.2	Required SWPPP Modifications.....	28
5.3	SWPPP Availability.....	28
5.4	Additional Documentation Requirements.....	28
6.	Monitoring.....	29
6.1	Monitoring Procedures.....	29
6.1.1	Monitored Outfalls.....	29
6.1.2	Commingled Discharges.....	30
6.1.3	Measurable Storm Events.....	30
6.1.4	Sample Type.....	30
6.1.5	Adverse Weather Conditions.....	30
6.1.6	Irregular Stormwater Runoff.....	30
6.1.7	Monitoring Periods.....	30
6.1.8	Monitoring for Allowable Non-Stormwater Discharges.....	31
6.1.9	Timing of Sample.....	31
6.2	Required Monitoring.....	31
6.2.1	Benchmark Monitoring.....	31
6.2.2	Discharges to Impaired Waters Monitoring.....	33
6.2.3	Additional Monitoring Required by NDEQ.....	34
7.	Reporting and Recordkeeping.....	35
7.1	Reporting Monitoring Data to NDEQ.....	35
7.2	Additional Reporting.....	35
7.3	Recordkeeping.....	36
7.4	Addresses for Reports.....	36
7.4.1	NDEQ Addresses.....	36
7.4.2	Submissions to MS4s.....	36
8.	Sector-Specific Requirements for Industrial Activity.....	36
8.A.	Sector A – Timber Products.....	36
8.B.	Sector B – Paper and Allied Products.....	39
8.C.	Sector C – Chemical and Allied Products Manufacturing, and Refining.....	39
8.D.	Sector D – Asphalt Paving and Roofing Materials and Lubricant Manufacturing.....	41
8.E.	Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products.....	41
8.F.	Sector F – Primary Metals.....	43

8.G	Sector G – Metal Mining.....	45
8.H	Sector H – Coal Mines and Coal Mining-Related Facilities.....	54
8.I	Sector I – Oil and Gas Extraction.....	59
8.J	Sector J – Non-Metallic Mineral Mining and Dressing.....	60
8.K	Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities.....	66
8.L	Sector L – Landfills, Land Application Sites, and Open Dumps.....	69
8.M	Sector M – Automobile Salvage Yards.....	71
8.N	Sector N – Scrap Recycling and Waste Recycling Facilities.....	73
8.O	Sector O – Steam Electric Generating Facilities.....	77
8.P	Sector P – Land Transportation and Warehousing.....	80
8.Q	Sector Q – Water Transportation.....	82
8.R	Sector R – Ship and Boat Building and Repair Yards.....	84
8.S	Sector S – Air Transportation.....	86
8.T	Sector T – Treatment Works.....	90
8.U	Sector U – Food and Kindred Products.....	91
8.V	Sector V – Textile Mills, Apparel, and Other Fabric Products.....	93
8.W	Sector W – Furniture and Fixtures.....	94
8.X	Sector X – Printing and Publishing.....	94
8.Y	Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.....	95
8.Z	Sector Z – Leather Tanning and Finishing.....	97
8.AA	Sector AA – Fabricated Metal Products.....	98
8.AB	Sector AB – Transportation Equipment, Industrial or Commercial Machinery Facilities.....	101
8.AC	Sector AC –Electronic and Electrical Equipment and Components, Photographic and Optical Goods.....	101
8.AD	Sector AD – Stormwater Discharges Designated by the Director as Requiring Permits.....	101
9.	Permit Conditions Applicable to Specific Indian Country Lands, Service Delivery Areas, or Territories.....	102
9.1	Ponca Tribe of Nebraska.....	102
9.2	Omaha Tribe of Nebraska.....	102
9.3	Winnebago Tribe of Nebraska.....	102
9.4	Santee Sioux Tribe of Nebraska.....	102
9.5	Pine Ridge Trust Lands.....	103
9.6	Sac and Fox.....	103
9.7	Ioway Tribe of Kansas and Nebraska.....	103
9.7	Electronic Reporting.....	104
Appendices		
Appendix A	Definitions	
Appendix B	Standard Conditions	
Appendix C	Complete List of 40 CFR Subchapter N Categories	
Appendix D	Activities Covered	
Appendix E	Calculating Hardness	
Attachments		
Attachment 1	Procedures Related to Threatened and Endangered Species	
Attachment 2	Notice of Intent	
Attachment 3	Notice of Termination	
Attachment 4	Corrective Actions Report	
Attachment 5	No Exposure Certification Form	
Attachment 6	List of MS4s	
Attachment 7	Relocation Notice	
Attachment 8	ISW – SEMR	
Attachment 9	Special Waters	

1. Coverage under this Permit.

1.1 Eligibility.

1.1.1 Facilities Covered.

To be eligible to discharge under this permit, you must have a stormwater discharge associated with industrial activity from your primary industrial activity, as defined in Appendix A, provided your primary industrial activity is included in Appendix D, or be notified by NDEQ that you are eligible for coverage under Sector AD of this permit.

This permit authorizes the discharge of stormwater from both stationary and portable facilities. Additional notification and discharge authorization procedures apply to portable facilities as set forth in Part 1.8 of this permit.

This permit authorizes discharges of stormwater to waters of the state, a municipal separate storm sewer system (MS4) or a combined sewer system within the State of Nebraska. Discharges are subject to the terms and conditions of this permit. Eligibility excludes tribal lands within the State of Nebraska and as per the limitations in Part 1.1.4 of this permit. Facilities located within tribal lands within the State of Nebraska are under the authority of the USEPA Regions 7 and 8; refer to Part 9, "Permit Conditions Applicable to Specific Indian Country Lands, Service Delivery Areas, or Territories."

1.1.2 Allowable Stormwater Discharges.

Unless otherwise made ineligible under Part 1.1.4, the following discharges are eligible for coverage under this permit:

1.1.2.1 Stormwater discharges associated with industrial activity for any primary industrial activities and co-located industrial activities, as defined in Appendix A;

1.1.2.2 Discharges designated by NDEQ as needing a stormwater permit as provided in Sector AD;

1.1.2.3 Discharges that are not otherwise required to obtain NPDES permit authorization but are commingled with discharges that are authorized under this permit;

1.1.2.4 Discharges subject to any of the national stormwater-specific effluent limitations guidelines listed in Table 1-1, provided a site specific NPDES permit incorporating the effluent limitations guidelines has been issued authorizing that portion of the discharge. A partial list of effluent limitations guidelines has been included in Table 1-1 for reference; and

Table 1-1. Stormwater-specific Effluent Limitations Guidelines				
Regulated Discharge	40 CFR Section	Industry Sector	New Source Performance Standard (NSPS)	New Source Date
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 429, Subpart I	A	Yes	1/26/81
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	Part 418, Subpart A	C	Yes	4/8/74
Runoff from asphalt emulsion facilities	Part 443, Subpart A	D	Yes	7/28/75

Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C	E	Yes	2/20/74
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, and D	J	No	N/A
Runoff from hazardous waste and non-hazardous waste landfills	Part 445, Subparts A and B	K,L	Yes	2/2/00
Runoff from coal storage piles at steam electric generating facilities	Part 423	O	Yes	11/19/82 (10/8/74) ¹

¹ NSPS promulgated in 1974 were not removed via the 1982 regulation; therefore wastewaters generated by Part 423-applicable sources that were New Sources under the 1974 regulations are subject to the 1974 NSPS.

1.1.2.5 Discharges subject to any New Source Performance Standards (NSPS) identified in Table 1-1 (i.e., where facilities were constructed after the promulgation of that industry's NSPS), provided a site specific NPDES permit incorporating the NSPS has been issued, or you have received notification from NDEQ specifically acknowledging that these discharges will be allowed to be covered under this permit.

1.1.3 Allowable Non-Stormwater Discharges.

The following are the non-stormwater discharges authorized under this permit, provided the non-stormwater component of your discharge is in compliance with Part 2.1.2.10:

- Discharges from emergency fire-fighting activities;
- Fire hydrant and fire suppression system flushing (if the discharge does not contain chemical additives or surfactants) ;
- Potable water, including water line flushing but excluding chlorination of water lines for disinfection unless dechlorinated;
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
- Irrigation drainage from adjacent agricultural lands;
- Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
- Routine external building wash down that does not use detergents, solvents and degreasers;
- Uncontaminated ground water or spring water;
- Foundation or footing drains where flows are not contaminated with process materials; and
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

1.1.4 Limitations on Coverage.

1.1.4.1 Discharges Mixed with Non-Stormwater. Stormwater discharges that are mixed with non-stormwater, other than those non-stormwater discharges listed in Part 1.1.3, are not eligible for coverage under this permit.

1.1.4.2 Stormwater Discharges Associated with Construction Activity. Stormwater discharges associated with construction activity disturbing one acre or more are not eligible for coverage under this permit, unless in conjunction with mining activities or certain oil and gas extraction activities as specified in Sectors G, H, I, and J of this permit.

1.1.4.3 Discharges Currently or Previously Covered by Another Permit. Unless you received written notification from NDEQ specifically acknowledging that discharges previously covered under a site specific individual permit will be allowed to be covered under this permit, you are not eligible for coverage under this permit for any of the following:

- Stormwater discharges associated with industrial activity that are currently covered under an individual NPDES permit or an alternative NPDES general permit;
- Discharges covered within five years prior to the effective date of this permit by an individual permit or alternative general permit where that permit established site-specific numeric water quality-based limitations developed for the stormwater component of the discharge; or
- Discharges from facilities where any NPDES permit has been or is in the process of being denied, terminated, or revoked by NDEQ (this does not apply to the routine reissuance of permits).

1.1.4.4 Stormwater Discharges Subject to Effluent Limitations Guidelines. For discharges subject to stormwater effluent limitation guidelines under Title 119, Chapter 27, including those stormwater discharges identified in Table 1-1 are not eligible for coverage under this permit. For these discharges, a site specific NPDES permit incorporating the applicable effluent limitations guidelines must be issued by the Department. Compliance with this general permit is required for the remainder of the facilities discharges.

1.1.4.5 Endangered and Threatened Species and Critical Habitat Protection. Coverage under this permit is available only if your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not adversely affect any species that are state or federally-listed as endangered or threatened ("listed") and will not result in the adverse modification or destruction of habitat that is state or federally-designated as "critical habitat" by the Nebraska Game and Parks Commission (<http://outdoornebraska.gov>).

New or Expanded Dischargers. You must meet one of the criteria below:

- Criterion A. No state or federally-listed threatened or endangered species or their designated critical habitat are likely to occur in the "action area" as defined in Appendix A; or
- Criterion B. Consultation between the Nebraska Game and Parks Commission has been concluded and determined that either the discharge is not likely to have an effect, or through the use of control measures, the discharge is not likely to have an effect. Consultations can be either formal or informal.

Attachment 1 may be used to determine if the facility will qualify for Criterion A, or must seek to qualify under Criterion B. All new or expanded dischargers must submit Attachment 1 with the NOI or the NOI will be considered incomplete.

This permit does not replace any other requirements related to threatened and endangered species. This permit does not authorize discharges which will adversely affect an endangered or threatened species, or their critical habitats.

1.1.4.6 Historic Properties Preservation. This permit does not replace or satisfy any review requirements for Historic Places or Archeological Sites, from new or expanded discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered Archeological Sites. The owner must be in compliance with National Historic Preservation Act and conduct all required review and coordination related to historic preservation, including significant anthropological sites and any burial sites, with the Nebraska Historic Preservation Officer. You must comply with all applicable state, and local

laws concerning the protection of historic properties and places, your discharge authorization under this permit is contingent upon this compliance.

1.1.4.7 New Discharges to Water Quality Impaired Waters. If you are a new discharger you are not eligible for coverage under this permit to discharge to an "impaired water", as defined in Appendix A unless you:

- a. prevent all exposure to stormwater of the pollutant(s) for which the waterbody is impaired, and retain documentation of procedures taken to prevent exposure onsite with your SWPPP; or
- b. document that the pollutant(s) for which the waterbody is impaired is not present at your site, and retain documentation of this finding with your SWPPP; or
- c. in advance of submitting your NOI, provide to the NDEQ data to support a showing that the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retain such data onsite with your SWPPP. To do this, you must provide data and other technical information to the Department sufficient to demonstrate:
 - i. For discharges to waters without an EPA approved or established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the waterbody; or
 - ii. For discharges to waters with an EPA approved or established TMDL, that there are sufficient remaining wasteload allocations in an EPA approved or established TMDL to allow your discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards.

You are eligible under Part 1.1.4.7.c if you receive an affirmative determination from the Department that your discharge will not contribute to the existing impairment, in which case you must maintain such determination onsite with your SWPPP, or if the Department fails to respond within 30 days of submission of data to the Department.

1.1.4.8 New or Expanded Discharges to Waters Designated as State Resource Water – Class A or Class B for Antidegradation Purposes. If you are a new or expanded discharger, you are not eligible for coverage under this permit for discharges to waters designated as State Resource Water – Class A for antidegradation purposes under Title 117 (State Resource Waters are identified within Title 117, Chapters 5 & 6, also in Attachment 9). If you are a new or expanded discharger, you must receive written authorization from the Department specifically authorizing discharges to any State Resource Water – Class B.

1.1.4.9 New or Expanded Discharges to Public Drinking Water Supplies. If you are a new or expanded discharger, you must receive written authorization from the Department specifically authorizing discharges to any waters protected as a public drinking water supply (identified within Title 117, Chapters 5 & 6, also in Attachment 9).

1.2 Permit Compliance.

Any noncompliance with any of the requirements of this permit constitutes a violation of the Clean Water Act. As detailed in Part 3 (Corrective Actions) of this permit, failure to take any required corrective actions constitute an independent, additional violation of this permit and the Clean Water Act. As such, any actions and time periods specified for remedying noncompliance do not absolve parties of the initial underlying noncompliance. However, where corrective action is triggered by an event that does not itself constitute permit noncompliance, such as an exceedance of an applicable benchmark, there is no permit violation provided you take the required corrective action within the relevant deadlines established in Part 3.3.

1.3 Authorization under this Permit.

1.3.1 How to Obtain Authorization.

To obtain authorization under this permit, you must:

- Be located in the State of Nebraska where NDEQ is the permitting authority;
- Meet the Part 1.1 eligibility requirements;
- Develop a SWPPP according to the requirements in Part 5 of this permit.
- Select, design, install, and implement control measures in accordance with Part 2.1 to meet non-numeric effluent limits;
- Submit a complete and accurate Notice of Intent (NOI) form (included in Attachment 2 of this permit) to the address listed in Part 7.4.1; and

Timeframes for discharge authorization are contained in Table 1-2. Additional submission requirements may apply to facilities discharging through a Large, Medium or Small Municipal Separate Storm Sewer System (MS4), See Part 7.4.2.

Table 1-2. NOI Submittal Deadlines/Discharge Authorization Dates		
Category	NOI Submission Deadline	Discharge Authorization Date ¹
<u>Existing Dischargers</u> – in operation and previously authorized for coverage under the ISW-GP (originally issued July 1, 2011).	No later than January 1, 2017.	30 days after NDEQ receives a complete and accurate NOI. Your authorization under the ISW-GP is automatically continued until you have been granted coverage under this permit or an alternative permit, or coverage is otherwise terminated.
<u>New Dischargers or New Sources</u> - commencing discharging after issuance of this General Permit.	A minimum of 30 days prior to commencing operation of the facility.	30 days after NDEQ receives a complete and accurate NOI or upon notification of authorization from the NDEQ.
<u>New Dischargers or New Sources</u> - in operation prior to issuance of this General Permit but not covered under the previous General Permit or another NPDES permit.	Immediately, to minimize the time discharges from the facility will continue to be unauthorized.	60 days after NDEQ receives a complete and accurate NOI.

¹ Based on a review of your NOI or other information, NDEQ may delay your authorization for further review, notify you that additional effluent limitations are necessary, or may deny coverage under this permit and require submission of an application for an individual NPDES permit, as detailed in Part 1.6. In these instances, NDEQ will notify you in writing of the delay, of the need for additional effluent limits, or of the request for submission of an individual NPDES permit application.

1.3.2 Continuation of this Permit.

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with Title 119, Chapter 24 and remain in force and effect. If you were authorized to discharge under this permit prior to the expiration date, any discharges authorized under this permit will automatically remain covered by this permit until the earliest of:

- Your authorization for coverage under a reissued permit or a replacement of this permit following your timely and appropriate submittal of a complete NOI requesting authorization to discharge under the new permit and compliance with the requirements of the new permit; or

- Your submittal of a Notice of Termination; or
- Issuance or denial of an individual permit for the facility's discharges; or
- A formal permit decision by NDEQ not to reissue this general permit, at which time NDEQ will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease at the end of this time period.

1.4 Terminating Coverage.

1.4.1 Submitting a Notice of Termination.

To terminate permit coverage, you must submit a complete and accurate Notice of Termination using the paper Notice of Termination form included in Attachment 3 of this permit, to the address listed in Part 7.4.1. Your authorization to discharge under this permit terminates 14 days after a complete Notice of Termination is received. If you submit a Notice of Termination without meeting one or more of the conditions identified in Part 1.4.2, then your Notice of Termination is not valid. You are responsible for meeting the terms of this permit until your authorization is terminated. (Should an electronic submittal process be established for the State of Nebraska, this section shall not preclude the use of such a system.)

1.4.2 When to Submit a Notice of Termination.

You must submit a Notice of Termination within 30 days after one or more of the following conditions have been met:

- A new owner or operator has taken over responsibility for the facility; or
- You have ceased operations at the facility, there are not or no longer will be discharges of stormwater associated with industrial activity from the facility, and you have already implemented necessary sediment and erosion controls as required by Part 2.1.2.5;
- You are a Sector G, H, or J facility and you have met the applicable termination requirements; or
- You have obtained coverage under an individual or alternative general permit for all discharges required to be covered by an NPDES permit, unless NDEQ has required that you obtain such coverage under authority of Part 1.6.1, in which case coverage under this permit will terminate automatically.

1.5 Conditional Exclusion for No Exposure.

If you are covered by this permit, and become eligible for a no exposure conditional exclusion from permitting under Title 119, Ch. 10, section 007, you may file a No Exposure Certification. You are no longer required to have a permit upon submission of a complete and accurate No Exposure Certification to NDEQ. If you are no longer required to have permit coverage because of a no exposure conditional exclusion and have submitted a No Exposure Certification form to NDEQ, you are not required to submit a Notice of Termination. You must submit a No Exposure Certification to NDEQ once every five years and maintain a condition of No Exposure.

1.6 Alternative Permits.

1.6.1 NDEQ Requiring Coverage under an Alternative Permit.

NDEQ may require you to apply for and/or obtain authorization to discharge under either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition NDEQ to take action under this paragraph. If NDEQ requires you to apply for an individual NPDES permit, NDEQ will notify you in writing that a permit application is required. This notification will include a brief statement of the reasons for this decision and will provide application information. In addition, if you are an existing discharger authorized to discharge

under this permit, the notice will set a deadline to file the permit application, and will include a statement that on the effective date of the individual NPDES permit, or the alternative general permit as it applies to you, coverage under this general permit will terminate. NDEQ may grant additional time to submit the application if requested. If you are covered under this permit and fail to submit an individual NPDES permit application as required by NDEQ, then the applicability of this permit to you is terminated at the end of the day specified by NDEQ as the deadline for application submittal. NDEQ may take appropriate enforcement action for any unpermitted discharge.

1.6.2 Permittee Requesting Coverage under an Alternative Permit.

You may request to be excluded from coverage under this general permit by applying for an individual permit. In such a case, you must submit an individual permit application in accordance with the requirements of Title 119, with reasons supporting the request, to NDEQ. The request may be granted by issuance of an individual permit or authorization of coverage under an alternative general permit if your reasons are adequate to support the request. Should NDEQ determine that the reasons are not adequate; NDEQ may either deny the request or request further information.

When an individual NPDES permit is issued to you or you are authorized to discharge under an alternative NPDES general permit, your authorization to discharge under this permit is terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit.

1.7 General Conditions

1.7.1 Severability

Invalidation of a portion of this permit does not necessarily render the whole permit invalid. NDEQ's intent is that the permit is to remain in effect to the extent possible; in the event that any part of this permit is invalidated, NDEQ will advise the regulated community as to the effect of such invalidation.

1.7.2 Permit Attachments

The attachments to this permit (e.g., forms and guidance) may be modified without a formal modification of the permit.

1.7.3 Information Available

All permit applications, fact sheets, permits, discharge data, monitoring reports, and any public comments concerning such shall be available to the public for inspection and copying, unless such information about methods or processes is entitled to protection as trade secrets of the owner or operator under Neb. Rev. Stat. §81-1527, (Cum. Supp. 1992) and NDEQ Title 115, Chapter 4.

1.7.4 Penalties

Nothing in this permit shall preclude the initiation of any legal action or relieve the **Permittee** from any responsibilities, liabilities or penalties under Section 311 of the Clean Water Act. Violations of the terms and conditions of this permit may result in the initiation of criminal and/or civil actions in accordance with Nebraska Rev. Stat. §81-1508, as amended to date. Violations may also result in federal prosecution.

1.8 Conditions Applicable to Portable Facilities

1.8.1 Notification Requirements for Relocation of Portable Facilities

1.8.1.1 Notification to NDEQ. The permittee shall provide the Department with notification of the relocation of any facility at least 20 days in advance of each relocation Notification shall be

provided using the "Relocation Notice Form" (See Attachment 7) or equivalent. The following information shall be provided:

- the NPDES permit number (i.e., NER910000) and the NPDES reference number (e.g., NER911234), if it is available;
- the name of the facility;
- the legal description of the proposed relocation site;
- the name of the receiving stream;
- the identification of any storm water discharges to State Resource Waters or public drinking water supply identified in Attachment 9; and
- the anticipated dates of operations at the new location.

1.8.1.2 Notification to Others. If required or upon request, when a facility is relocated so that stormwater will be discharged through a Combined Sewer (CS), or Municipal Separate Storm Sewer System (MS4), whether a large, medium, or small municipal separate storm sewer system, the permittee shall concurrently provide written notification of the relocation to the operator of the CS, or MS4 through which they will discharge.

1.8.1.3 Additional Information. The Department may request additional information as necessary to evaluate a relocation request.

1.8.2 Site Specific Discharge Authorizations, Denials and Revocations for Portable Facilities

1.8.2.1 Authorizations to discharge to Special Waters. Portable sources shall obtain written authorization from the Department on a site specific basis prior to discharging industrial storm water to any of the State Resource Waters or public drinking water supplies established by Title 117, also identified in Attachment 9. When submitting notice of relocation to a location which will discharge to one of the described special waters, the submission shall identify the water to which the facility will discharge and an explanation of why site specific authorization is needed (e.g. Relocation site discharges to Stone Creek, State Resource Water – Class B). Discharges to other waters of the State do not require written discharge authorization, but site specific denials or revocations of discharge authorizations can be made by the Department.

1.8.2.2 Denial of Authorization. The Department may deny or revoke authorization to discharge for portable facilities at specific locations due to potential impacts on: water quality, State Resource Waters, listed endangered or threatened species, habitat critical to an endangered or threatened species, or human health or safety. The Department shall provide the permittee with a written notice of the denial or revocation, and an explanation of the reason for the denial. Temporary denials may be required to provide time to review additional information submitted pursuant to Section 1.8.1.3.

1.8.3 Operational Changes Relative to Facility Portability

The permittee shall notify the Department in writing if a facility is "converted" from a stationary to a portable facility, or vice-versa.

1.8.4 Exceptions for Portable Facilities

1.8.4.1 Outfall Specific Requirements. Portable facilities need not develop outfall specific procedures and information, portable facilities are required to identify the potential pollutants that could be released from the facility.

1.8.4.2 Inspections. At portable sources, the permittee shall conduct inspections within the first seven days after relocation and at least one additional time within the first 90 days of operation to ensure that all controls are properly installed and functioning. After the first 90 days of operation, Routine Facility Inspections (Part 4.1) shall resume quarterly, or more frequently if required by

sector specific requirements. Upon termination of activities at a temporary site, the entire site must undergo a Final Inspection for the presence of spilled materials, industrial materials, and industrial wastes. All occurrences must be properly addressed and removed.

1.8.4.3 Visual Assessment. Portable facilities must follow the procedures established in Part 4.2 for quarterly visual assessment of stormwater discharges for those quarters which the facility will be operating under this permit (when operating in the State of Nebraska).

1.8.4.4 Comprehensive Site Inspections. Facilities operating under this permit for less than three months per calendar year are waived from the requirement to perform annual comprehensive site inspections. Facilities operating under this permit for more than three months per calendar year must conduct comprehensive site inspections annually. It is recommended that these comprehensive inspections be conducted as the second inspection within the first 90 days after relocation (see 1.8.4.2) at one of the locations for which the facility will operate during the calendar year.

1.8.5 Monitoring

1.8.5.1 Impaired Waters. Portable facilities discharging to water quality impaired waters must incorporate controls to reduce discharges of pollutants for which the water is impaired. Portable facilities are not required to conduct the monitoring as described in Part 6.2.2., unless requested by the Department.

1.8.5.2 Benchmark Monitoring. Portable facilities are not required to conduct the benchmark monitoring described within the sector specific requirements unless requested by NDEQ.

1.8.5.3 Additional Monitoring. NDEQ may require that a particular portable facility conduct impaired waters monitoring, benchmark monitoring or other monitoring, consistent with the provisions of this permit (see Part 6.)

1.8.6 Site Closure Requirements

1.8.6.1 Agricultural land. Portable facilities utilizing agricultural land must return the site to its preexisting agricultural use. After completing the Final Inspection outlined in 1.8.4.2, the site must: remove all industrial materials and wastes including petroleum affected soils, remediate compaction, replace topsoil, and seed an agricultural crop or temporary cover crop.

1.8.6.1 Non-Agricultural land. Portable facilities utilizing non-agricultural land must remove all industrial materials and wastes including petroleum affected soils and complete the Final Inspections outlined in 1.8.4.2.

2. Control Measures and Effluent Limits

In the technology-based limits included in Part 2.1 and in Part 8, the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

2.1 Control Measures

You must select, design, install, and implement control measures (including best management practices) to address the selection and design considerations in Part 2.1.1, meet the non-numeric effluent limits in Part 2.1.2, and meet limits contained in an individual NPDES permit as required in Part 2.1.3 for facilities where effluent limitations guidelines are applicable. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer’s specifications. Note that you may deviate from such manufacturer’s specifications where you provide justification for such deviation and include documentation of your rationale in the part of your SWPPP that describes your control measures,

consistent with Part 5.1.4. If you find that your control measures are not achieving their intended effect of minimizing pollutant discharges, you must modify these control measures as expeditiously as practicable. Regulated stormwater discharges from your facility include stormwater run-on that commingles with stormwater discharges associated with industrial activity at your facility.

2.1.1 Control Measure Selection and Design Considerations

You must consider the following when selecting and designing control measures:

- preventing stormwater from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from stormwater;
- using control measures in combination is more effective than using control measures in isolation for minimizing pollutants in your stormwater discharge;
- assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
- minimizing ground water contamination, infiltration is not appropriate for discharges likely to contain pollutants which are mobile within the soil;
- Underground Injection Control authorization may be required for certain types of practices which infiltrate (i.e. Class V Injection Well)
- attenuating flow using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;
- conserving and/or restoring of riparian buffers will help protect streams from stormwater runoff and improve water quality; and
- using treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

2.1.2 Non-Numeric Technology-Based Effluent Limits

2.1.2.1 Minimize Exposure. You must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, you should pay particular attention to the following:

- use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;
- locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas);
- clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;
- use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible;
- use spill/overflow protection equipment;
- drain fluids from equipment and vehicles prior to on-site storage or disposal;
- perform all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and
- ensure that all washwater drains to a proper collection system (i.e., not the stormwater drainage system).

The discharge of vehicle and equipment washwater, including tank cleaning operations, is not authorized by this permit. These wastewaters must be covered under a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or disposed of otherwise in accordance with applicable law.

Note: Industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged to receiving waters or if discharges are authorized under another NPDES permit.

- 2.1.2.2 Good Housekeeping.** You must keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.
- 2.1.2.3 Maintenance.** You must regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters. You must maintain all control measures that are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If you find that your control measures need to be replaced or repaired, you must make the necessary repairs or modifications as expeditiously as practicable.
- 2.1.2.4 Spill Prevention and Response Procedures.** You must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, you must implement:
- Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides," etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
 - Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
 - Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your stormwater pollution prevention team (see Part 5.1.1); and
 - Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under Title 126 occurs during a 24-hour period, you must notify: the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302; The Department of Environmental Quality at (402) 471-2186 or (402) 471-4230 during normal business hours (Monday through Friday 8am-5pm) or the Nebraska State Patrol at (402) 471-4545 outside of normal business hours (after business hours, holidays, weekends) in accordance with the requirements of Title 126 as soon as you have knowledge of the discharge. Local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available.
- 2.1.2.5 Erosion and Sediment Controls.** You must stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions you must take to meet this limit, you must place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing,

installing, and implementing appropriate control measures, you are encouraged to consult with EPA's internet-based resources relating to Best Management Practices (BMPs) for erosion and sedimentation, including the sector-specific *Industrial Stormwater Fact Sheet Series*, (www.epa.gov/npdes/stormwater-discharges-industrial-activities#factsheets), *National Menu of Stormwater BMPs* (www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#edu), and *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (www.epa.gov/polluted-runoff-nonpoint-source-pollution/urban-runoff-national-management-measures), and any similar State or Local publications.

- 2.1.2.6 Management of Runoff.** You must divert, reuse, contain, or otherwise reduce stormwater runoff, to minimize pollutants in your discharges. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with EPA's internet-based resources relating to runoff management, including the sector-specific *Industrial Stormwater Fact Sheet Series*, (www.epa.gov/npdes/stormwater-discharges-industrial-activities#factsheets), *National Menu of Stormwater BMPs* (www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#edu), and *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (www.epa.gov/polluted-runoff-nonpoint-source-pollution/urban-runoff-national-management-measures), and any similar State or Local publications.
- 2.1.2.7 Salt Storage Piles or Piles Containing Salt.** You must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged or if discharges from the piles are authorized under another NPDES permit.
- 2.1.2.8 Sector Specific Non-Numeric Effluent Limits.** You must achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part 8.
- 2.1.2.9 Employee Training.** You must train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team. Training must cover both the specific control measures used to achieve the effluent limits in this Part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit. NDEQ recommends training be conducted at least annually (or more often if employee turnover is high).
- 2.1.2.10 Non-Stormwater Discharges.** You must eliminate non-stormwater discharges not authorized by an NPDES permit. See Part 1.1.3 for a list of non-stormwater discharges authorized by this permit.
- 2.1.2.11 Waste, Garbage and Floatable Debris.** You must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.
- 2.1.2.12 Dust Generation and Vehicle Tracking of Industrial Materials.** You must minimize generation of dust and off-site tracking of raw, final, or waste materials.
- 2.1.3 Numeric Effluent Limitations Based on Effluent Limitations Guidelines**

If you are in an industrial category subject to one of the effluent limitations guidelines identified in Table 1-1 (see Part 1.1.2.4), you must apply for and receive authorization under a separate Individual NPDES permit which will incorporate these limits. The Individual NPDES permit will

specify the required monitoring. Compliance with this general permit is required for the remainder of the facilities discharges.

2.2 Water Quality-Based Effluent Limitations.

2.2.1 Water Quality Standards

Your discharge must be controlled as necessary to meet applicable water quality standards.

NDEQ expects that compliance with the other conditions in this permit will control discharges as necessary to meet applicable water quality standards. If at any time you become aware, or NDEQ determines, that your discharge causes or contributes to an exceedance of applicable water quality standards, you must take corrective action as required in Part 3.1, document the corrective actions as required in Parts 3.4 and 5.4, and report the corrective actions to NDEQ as required in Part 3.4.

Additionally, NDEQ may impose additional water quality-based limitations on a site-specific basis, or require you to obtain coverage under an individual permit, if information in your NOI, required reports, or from other sources indicates that your discharges are not controlled as necessary to meet applicable water quality standards.

2.2.2 Discharges to Water Quality Impaired Waters.

2.2.2.1 Existing Discharge to an Impaired Water with an EPA Approved or Established TMDL. If you discharge to an impaired water with an EPA approved or established TMDL, NDEQ will inform you if any additional limits or controls are necessary for your discharge to be consistent with the assumptions of any available wasteload allocation in the TMDL, or if coverage under an individual permit is necessary in accordance with Part 1.6.1.

2.2.2.2 Existing Discharge to an Impaired Water without an EPA Approved or Established TMDL. If you discharge to an impaired water without an EPA approved or established TMDL, you are required to comply with Part 2.2.1 and the monitoring requirement of Part 6.2.2. Note that this provision also applies to situations where NDEQ determines that your discharge is not controlled as necessary to meet water quality standards in a downstream water segment, even if your discharge is to a receiving water that is not specifically identified on a Section 303(d) list.

2.2.2.3 New Discharge to an Impaired Water. If your authorization to discharge under this permit relied on Part 1.1.4.7 for a new discharge to an impaired water, you must implement and maintain any control measures or conditions on your site that enabled you to become eligible under Part 1.1.4.7, and modify such measures or conditions as necessary pursuant to any Part 3 corrective actions. You are also required to comply with Part 2.2.1 and the monitoring requirements of Parts 6.2.2.

2.2.3 State Resource Water –Class B Antidegradation Requirements for New or Increased Dischargers

If you are a new discharger, or an existing discharger required to notify NDEQ of an increased discharge consistent with Part 7.2 (i.e., a “planned changes” report), and you discharge directly to waters designated by the Department as State Resource Water – Class B for antidegradation purposes under Title 117 (State Resource Waters are identified within Title 117, Chapters 5 & 6, also in Attachment 9), NDEQ may notify you that additional analyses, control measures, or other permit conditions are necessary to comply with the applicable antidegradation requirements, or notify you that an individual permit application is necessary in accordance with Part 1.6.1. If you are a new or expanded discharger, you must receive written authorization from the Department specifically authorizing discharges to any State Resource Water – Class B.

2.3 Requirements Relating to Endangered Species and Historic Properties

If your eligibility under either Part 1.1.4.5 or Part 1.1.4.6 was made possible through your, or another operator's, agreement to include certain measures or prerequisite actions, or implement certain terms and conditions, you must comply with all such agreed-upon requirements to maintain eligibility under this General Permit.

3. Corrective Actions

3.1 Conditions Requiring Review and Revision to Eliminate Problem

If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to ensure that the condition is eliminated and will not be repeated in the future:

- an unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at your facility;
- you become aware, or NDEQ determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
- an inspection or evaluation of your facility by a NDEQ official, EPA official, or local entity, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
- you find in your routine facility inspection, quarterly visual assessment, or comprehensive site inspection that your control measures are not being properly operated and maintained.

3.2 Conditions Requiring Review to Determine if Modifications Are Necessary

If any of the following conditions occur, you must review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit:

- construction or a change in design, operation, or maintenance at your facility significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharged; or
- the average of 4 quarterly sampling results exceeds an applicable benchmark. If less than 4 benchmark samples have been taken, but the results are such that an exceedance of the 4 quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than 4 times the benchmark level) this is considered a benchmark exceedance, triggering this review.

3.3 Corrective Action Deadlines

You must document your discovery of any of the conditions listed in Parts 3.1 and 3.2 within 24 hours of making such discovery. Subsequently, within 14 days of such discovery, you must document any corrective action(s) to be taken to eliminate or further investigate the deficiency, or if no corrective action is needed, the basis for that determination. Specific documentation required within 24 hours and 14 days is detailed in Part 3.4. If you determine that changes are necessary following your review, any modifications to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are not grace periods, but are schedules considered reasonable for documenting your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

3.4 Corrective Action Report

Within 24 hours of discovery of any condition listed in Parts 3.1 and 3.2, you must document the following information (i.e., Section 1 of the Corrective Actions Form, provided in Attachment 4):

- Identification of the condition triggering the need for corrective action review;
- Description of the problem identified; and
- Date the problem was identified.

Within 14 days of discovery of any condition listed in Parts 3.1 and 3.2, you must document the following information (i.e., Section 2 of the Corrective Actions Form, provided in Attachment 4):

- Summary of corrective action taken or to be taken (or, for triggering events identified in Part 3.2 where you determine that corrective action is not necessary, the basis for this determination);
- Notice of whether SWPPP modifications are required as a result of this discovery or corrective action;
- Date corrective action initiated; and
- Date corrective action completed or expected to be completed.

You must submit this documentation to NDEQ at the address provided in 7.4.1 with 30 days of initial discovery and retain a copy onsite with your SWPPP as required in Part 5.4.

3.5 Effect of Corrective Action

If the event triggering the review is a permit violation (e.g., non-compliance with an effluent limit), correcting it does not remove the original violation. Additionally, failing to take corrective action in accordance with this section is an additional permit violation. NDEQ will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations.

3.6 Substantially Identical Outfalls

If the event triggering corrective action is linked to an outfall that represents other substantially identical outfalls, your review must assess the need for corrective action for each outfall represented by the outfall that triggered the review. Any necessary changes to control measures that affect these other outfalls must also be made before the next storm event if possible, or as soon as practicable following that storm event.

4. Inspections

You must conduct the inspections in Parts 4.1, 4.2, and 4.3 at your facility.

4.1 Routine Facility Inspections.

4.1.1 Routine Facility Inspection Procedures.

Conduct routine facility inspections of all areas of the facility where industrial materials or activities are exposed to stormwater, and of all stormwater control measures used to comply with the effluent limits contained in this permit. Routine facility inspections must be conducted at least quarterly (i.e., once each calendar quarter) although in many instances, more frequent inspection (e.g., monthly) may be appropriate for some types of equipment, processes, and control measures or areas of the facility with significant activities and materials exposed to stormwater. Perform these inspections during periods when the facility is in operation. You must specify the relevant inspection schedules in your SWPPP document as required in Part 5.1.5. These routine inspections must be performed by qualified personnel (for definition see Appendix A) with at least one member of your stormwater pollution prevention team participating. At least once each calendar year, the routine facility inspection must be conducted during a period when

stormwater is discharging off-site or to an on-site storm water retention structure. Inspections conducted in addition to those required by this permit need not conform to requirements of this section. Only those inspections conducted for compliance of this permit must conform (i.e. weekly inspections of a high risk portion of the facility need not include all areas of the facility or comply with the documentation requirements).

4.1.2 Routine Facility Inspection Documentation.

You must document the findings of each routine facility inspection performed and maintain this documentation onsite with your SWPPP as required in Part 5.4. You are not required to submit your routine facility inspection findings to NDEQ, unless specifically requested to do so. At a minimum, your documentation of each routine facility inspection must include:

- The inspection date and time;
- The name(s), title(s) and signature(s) of the inspector(s);
- Weather information and a description of any discharges occurring at the time of the inspection;
- Any previously unidentified discharges of pollutants from the site;
- Any control measures needing maintenance or repairs;
- Any failed control measures that need replacement;
- Any incidents of noncompliance observed; and
- Any additional control measures needed to comply with the permit requirements.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part 3 of this permit.

4.1.3 Exceptions to Routine Facility Inspections.

Inactive and Unstaffed Sites: The requirement to conduct routine facility inspections on a quarterly basis does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. Such a facility is only required to conduct an annual comprehensive site inspection in accordance with the requirements of Part 4.3. To invoke this exception, you must maintain a statement in your SWPPP pursuant to Part 5.1.5.2 indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in Title 119, Chapter 10 Part 007.04C. The statement must be signed and certified in accordance with Appendix B, Subsection B.2. If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately resume quarterly facility inspections. If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must include the same signed and certified statement as above and retain it with your records pursuant to Part 5.4.

Inactive and unstaffed facilities covered under Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), and J (Non-Metallic Mineral Mining and Dressing), are not required to meet the "no industrial materials or activities exposed to stormwater" standard to be eligible for this exception from routine inspections, consistent with the requirements established in Parts 8.G.8.4, 8.H.8.1, and 8.J.8.1.

4.2 Quarterly Visual Assessment of Stormwater Discharges.

4.2.1 Quarterly Visual Assessment Procedures.

Once each quarter for the entire permit term, you must collect a stormwater sample from each outfall (except as noted in Part 4.2.3) and conduct a visual assessment of each of these samples. For an industrial facility with an on-site stormwater retention structure, visual assessments may be conducted on the stormwater entering the structure. These samples are not required to be collected consistent with Title 119, Chapter 14 Part 001.02D (see 40 CFR Part 136) procedures but should be collected in such a manner that the samples are representative of the stormwater discharge.

The visual assessment must be made:

- Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and you must document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from your site; and
- For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if you document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period.

You must visually inspect the sample for the following water quality characteristics:

- Color;
- Odor;
- Clarity;
- Floating solids;
- Settled solids;
- Suspended solids;
- Foam;
- Oil sheen; and
- Other obvious indicators of stormwater pollution.

4.2.2 Quarterly Visual Assessment Documentation.

You must document the results of your visual assessments and maintain this documentation onsite with your SWPPP as required in Part 5.4. You are not required to submit your visual assessment findings to NDEQ, unless specifically requested to do so. At a minimum, your documentation of the visual assessment must include:

- Sample location(s)
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination,
- If applicable, why it was not possible to take samples within the first 30 minutes.

Any corrective action required as a result of a quarterly visual assessment must be performed consistent with Part 3 of this permit.

4.2.3 Exceptions to and Timing of Quarterly Visual Assessments.

Adverse Weather Conditions: When adverse weather conditions prevent the collection of samples during the quarter, you must take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with your SWPPP records as described in Part 5.4. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions.

Semi-Arid Climates: If your facility is located in a semi-arid climate where limited rainfall occurs during parts of the year, then your samples for the quarterly visual assessments may be distributed during seasons when precipitation runoff occurs.

Snowmelt: At least one quarterly visual assessment must capture snowmelt discharge, as described in Part 6.1.3.

Inactive and Unstaffed Sites: The requirement for a quarterly visual assessment does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. To invoke this exception, you must maintain a statement in your SWPPP as required in Part 5.1.5.2 indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in Title 119, Chapter 10 Part 007.04C. The statement must be signed and certified in accordance with Appendix B, Subsection B.2. If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately resume quarterly visual assessments. If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must include the same signed and certified statement as above and retain it with your records pursuant to Part 5.4.

Inactive and unstaffed facilities covered under Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), and J (Non-Metallic Mineral Mining and Dressing), are not required to meet the “no industrial materials or activities exposed to stormwater” standard to be eligible for this exception from quarterly visual assessment, consistent with the requirements established in Parts 8.G.8.4, 8.H.8.1, and 8.J.8.1.

Substantially Identical Outfalls: If your facility has two or more outfalls that you believe discharge substantially identical effluents, as documented in Part 5.1.5.2, you may conduct quarterly visual assessments of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s) provided that you perform visual assessments on a rotating basis of each substantially identical outfall throughout the period of your coverage under this permit.

If stormwater contamination is identified through visual assessment performed at a substantially identical outfall, you must assess and modify your control measures as appropriate for each outfall represented by the monitored outfall.

4.3 Comprehensive Site Inspections.

4.3.1 Comprehensive Site Inspection Procedures.

You must conduct annual comprehensive site inspections while you are covered under this permit. Annual, as defined in this Part, means once during each calendar year beginning with the period you are authorized to discharge under this permit:

You are waived from having to perform a comprehensive site inspection for an inspection period, as defined above, if you obtain authorization to discharge less than three months before the end of that calendar year.

Should your coverage be administratively continued after the expiration date of this permit, you must continue to perform these inspections annually until you are no longer covered.

Comprehensive site inspections must be conducted by qualified personnel with at least one member of your stormwater pollution prevention team participating in the comprehensive site inspections.

Your comprehensive site inspections must cover all areas of the facility affected by the requirements in this permit, including the areas identified in the SWPPP as potential pollutant sources (see Part 5.1.3) where industrial materials or activities are exposed to stormwater, any areas where control measures are used to comply with the effluent limits contained in a site specific NPDES Permit, and areas where spills and leaks have occurred in the past 3 years. The inspections must also include a review of monitoring data collected in accordance with Part 6.2. Inspectors must consider the results of the past year's visual and analytical monitoring when planning and conducting inspections. Inspectors must examine the following:

- Industrial materials, residue, or trash that may have or could come into contact with stormwater;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas; and
- Control measures needing replacement, maintenance, or repair.

Stormwater control measures required by this permit must be observed to ensure that they are functioning correctly. If discharge locations are inaccessible, nearby downstream locations must be inspected.

Your annual comprehensive site inspection may also be used as one of the routine inspections, as long as all components of both types of inspections are included.

4.3.2 Comprehensive Site Inspection Documentation.

You must document the findings of each comprehensive site inspection and maintain this documentation onsite with your SWPPP as required in Part 5.4. At a minimum, your documentation of the comprehensive site inspection must include:

- The date of the inspection;
- The name(s) and title(s) of the personnel making the inspection;
- Findings from the examination of areas of your facility identified in Part 4.3.1;
- All observations relating to the implementation of your control measures including:
 - previously unidentified discharges from the site,
 - previously unidentified pollutants in existing discharges,
 - evidence of, or the potential for, pollutants entering the drainage system;
 - evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, including flow dissipation measures to prevent scouring, and
 - additional control measures needed to address any conditions requiring corrective action identified during the inspection.
- Any required revisions to the SWPPP resulting from the inspection;

- Any incidents of noncompliance observed or a certification stating the facility is in compliance with this permit (if there is no noncompliance); and

Any corrective action required as a result of the comprehensive site inspection must be performed consistent with Part 3 of this permit.

5. Stormwater Pollution Prevention Plan (SWPPP).

You must prepare a SWPPP for your facility before submitting your Notice of Intent (NOI) for permit coverage. If you prepared a SWPPP for coverage under a previous NPDES permit, you must review and update the SWPPP to implement all provisions of this permit prior to submitting your NOI. The SWPPP does not contain effluent limitations; the narrative limitations are contained in Part 2 of the permit, and for some sectors, Part 8 of the permit. The SWPPP is intended to document the selection, design, and installation of control measures which will be used to meet the limitations. Separate from the SWPPP, the additional documentation requirements (see Part 5.4) are intended to document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.

5.1 Contents of Your SWPPP.

For coverage under this permit, your SWPPP must contain all of the following elements:

- Stormwater pollution prevention team (see Part 5.1.1);
- Site description (see Part 5.1.2);
- Summary of potential pollutant sources (see Part 5.1.3);
- Description of control measures (see Part 5.1.4);
- Schedules and procedures (see Part 5.1.5);
- Documentation to support eligibility considerations regarding other resources (see Part 5.1.6); and
- Signature requirements (see Part 5.1.7).

Where your SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS) developed for a National Environmental Performance Track facility or similar management system, copies of the relevant portions of those documents must be kept with your SWPPP.

5.1.1 Stormwater Pollution Prevention Team.

You must identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. Your stormwater pollution prevention team is responsible for assisting the facility manager in developing and revising the facility's SWPPP as well as maintaining control measures and taking corrective actions where required. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit and your SWPPP.

5.1.2 Site Description.

Your SWPPP must include the following:

- Activities at the Facility. Provide a description of the nature of the industrial activities at your facility.
- General location map. Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of your facility and all receiving waters for your stormwater discharges.
- Site map. Provide a map showing:
 - the size of the property in acres;

- the location and extent of significant structures and impervious surfaces;
- directions of stormwater flow (use arrows);
- locations of all existing structural control measures;
- locations of all receiving waters in the immediate vicinity of your facility, indicating if any of the waters are impaired and, if so, whether the waters have TMDLs established for them;
- locations of all stormwater conveyances including ditches, pipes, and swales;
- locations of potential pollutant sources identified under Part 5.1.3.2;
- locations where significant spills or leaks identified under Part 5.1.3.3 have occurred;
- locations of all stormwater monitoring points;
- locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g., SW-Outfall No. 1, No. 2, etc), indicating if you are treating one or more outfalls as "substantially identical" under Parts 4.2.3, 5.1.5.2, and 6.1.1, and an approximate outline of the areas draining to each outfall;
- combined sewers, or municipal separate storm sewer systems, where your stormwater discharges to them;
- locations and descriptions of all non-stormwater discharges identified under Part 2.1.2.10;
- locations of the following activities where such activities are exposed to precipitation:
 - o fueling stations;
 - o vehicle and equipment maintenance and/or cleaning areas;
 - o loading/unloading areas;
 - o locations used for the treatment, storage, or disposal of wastes;
 - o liquid storage tanks;
 - o processing and storage areas;
 - o immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
 - o transfer areas for substances in bulk; and
 - o machinery; and
- locations and sources of run-on to your site from adjacent property that contains significant quantities of pollutants.

5.1.3 Summary of Potential Pollutant Sources.

You must document areas at your facility where industrial materials or activities are exposed to stormwater and from which allowable non-stormwater discharges are released. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each area identified, the description must include:

- 5.1.3.1 Activities in the area.** A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).
- 5.1.3.2 Pollutants.** A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the 3 years prior to the date you prepare or amend your SWPPP.
- 5.1.3.3 Spills and Leaks.** You must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be

affected by such spills and leaks. You must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the 3 years prior to the date you prepare or amend your SWPPP.

Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.

5.1.3.4 Non-Stormwater Discharges. You must document that you have evaluated for the presence of non-stormwater discharges and that all unauthorized discharges have been eliminated. Documentation of your evaluation must include:

- The date of any evaluation;
- A description of the evaluation criteria used;
- A list of the outfalls or onsite drainage points that were directly observed during the evaluation;
- The different types of non-stormwater discharge(s) and source locations; and
- The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.

5.1.3.5 Salt Storage. You must document the location of any storage piles containing salt used for deicing or other commercial or industrial purposes.

5.1.3.6 Sampling Data. You must summarize all stormwater discharge sampling data collected at your facility during the previous permit term.

5.1.4 Description of Control Measures.

5.1.4.1 Control Measures to Meet Technology-Based and Water Quality-Based Effluent Limits. You must document the location and type of control measures you have installed and implemented at your site to achieve the non-numeric effluent limits in Part 2.1.2, and where applicable in Part 8, the effluent limitations guidelines-based limits in Part 2.1.3, the water quality-based effluent limits in Part 2.2, and any agreed-upon endangered species related requirements in Parts 2.3, and describe how you addressed the control measure selection and design considerations in Part 2.1.1. This documentation must describe how the control measures at your site address both the pollutant sources identified in Part 5.1.3, and any stormwater run-on that commingles with any discharges covered under this permit.

5.1.5 Schedules and Procedures

5.1.5.1 Pertaining to Control Measures Used to Comply with the Effluent Limits in Part 2.

The following must be documented in your SWPPP:

- Good Housekeeping (See Part 2.1.2.2) – A schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;
- Maintenance (See Part 2.1.2.3) – Preventative maintenance procedures, including regular inspections, testing, maintenance, and repair of all industrial equipment and systems, and control measures, to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line;

- Spill Prevention and Response Procedures (See Part 2.1.2.4) – Procedures for preventing and responding to spills and leaks. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review consistent with Part 5.3; and
- Employee Training (Part 2.1.2.9) – A schedule for all types of necessary training.

5.1.5.2 Pertaining to Monitoring and Inspection. Prior to the beginning of any required monitoring period, you must document in your SWPPP your procedures for conducting the three types of analytical monitoring specified by this permit, where applicable to your facility, including:

- Benchmark monitoring (see Part 6.2.1);
- Impaired waters monitoring (see Part 6.2.2); and
- Other monitoring as required by NDEQ (see Part 6.2.3).

For each type of monitoring, your SWPPP must document:

- Locations where samples are collected, including any determination that two or more outfalls are substantially identical;
- Parameters for sampling and the frequency of sampling for each parameter;
- Schedules for monitoring at your facility, including schedule for alternate monitoring periods for climates with irregular stormwater runoff (see Part 6.1.6);
- Any numeric control values (benchmarks, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and
- Procedures (e.g., responsible staff, logistics, laboratory to be used, etc.) for gathering storm event data, as specified in Part 6.1.

If you are invoking the exception for inactive and unstaffed sites for benchmark monitoring, you must include in your SWPPP the information to support this claim as required by Part 6.2.1.3.

You must document the following in your SWPPP if you plan to use the substantially identical outfall exception for your quarterly visual assessment requirements in Part 4.2 or your benchmark monitoring requirements in Part 6.2.1:

- Location of each of the substantially identical outfalls;
- Description of the general industrial activities conducted in the drainage area of each outfall;
- Description of the control measures implemented in the drainage area of each outfall;
- Description of the exposed materials located in the drainage area of each outfall that are likely to be significant contributors of pollutants to stormwater discharges;
- An estimate of the runoff coefficient of the drainage areas (low = under 40%; medium = 40 to 65%; high = above 65%); and
- Why the outfalls are expected to discharge substantially identical effluents.

You must document in your SWPPP your procedures for performing, as appropriate, the three types of inspections specified by this permit, including:

- Routine facility inspections (see Part 4.1);
- Quarterly visual assessment of stormwater discharges (see Part 4.2); and
- Comprehensive site inspections (see Part 4.3).

For each type of inspection performed, your SWPPP must identify:

- Person(s) or positions of person(s) responsible for inspection;

- Schedules for conducting inspections, including tentative schedule for facilities in climates with irregular stormwater runoff discharges (see Part 4.2.3); and
- Specific items to be covered by the inspection, including schedules for specific outfalls.

If you are invoking the exception for inactive and unstaffed sites relating to routine facility inspections and quarterly visual assessments, you must include in your SWPPP the information to support this claim as required by Parts 4.1.3 and 4.2.3.

5.1.6 Documentation to Support Eligibility Considerations Under Other Federal Laws.

5.1.6.1 Documentation Regarding Endangered Species. You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.5 (Endangered and Threatened Species and Critical Habitat Protection).

5.1.6.2 Documentation Regarding Historic Properties. You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.6 (Historic Properties Preservation).

5.1.7 Signature Requirements.

You must sign and date your SWPPP in accordance with Appendix B, Subsection B.2, including the date of signature.

5.2 Required SWPPP Modifications.

You must modify your SWPPP whenever necessary to address any of the triggering conditions for corrective action in Part 3.1 and to ensure that they do not reoccur, or to reflect changes implemented when a review following the triggering conditions in Part 3.2 indicates that changes to your control measures are necessary to meet the effluent limits in this permit. Changes to your SWPPP document must be made in accordance with the corrective action deadlines in Parts 3.3 and 3.4, and must be signed and dated in accordance with Appendix B, Subsection B.2.

5.3 SWPPP Availability.

You must retain a copy of the current SWPPP required by this permit at the facility, and it must be immediately available to EPA; NDEQ; and the operator of an MS4 receiving discharges from the site. NDEQ may provide access to portions of your SWPPP to a member of the public upon request, or to other Federal, State, or local agencies. Confidential Business Information (CBI) may be withheld from the public in accordance with the provisions of Title 115, Chapter 4. Unless specified elsewhere in this permit or in the request, you are required to furnish a copy of the SWPPP and any other information requested within seven (7) calendar days. Submissions shall be sent to the address provided in 7.4.1.

5.4 Additional Documentation Requirements.

You are required to keep the following inspection, monitoring, and certification records with your SWPPP that together keep your records complete and up-to-date, and demonstrate your full compliance with the conditions of this permit:

- A copy of the NOI submitted to NDEQ along with any correspondence exchanged between you and NDEQ specific to coverage under this permit;
- A copy of the acknowledgment letter you receive from the NDEQ (or electronic notification system should it become available during the term of this permit) notifying you of your permit authorization number;
- A copy of this permit (an electronic copy easily available to SWPPP personnel is also acceptable);

- Descriptions and dates of any incidences of significant spills, leaks, or other releases that resulted in discharges of pollutants to waters of the State, through stormwater or otherwise; the circumstances leading to the release and actions taken in response to the release; and measures taken to prevent the recurrence of such releases (see Part 2.1.2.4);
- Records of employee training, including date training received (see Part 2.1.2.9);
- Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, date(s) that the control measure(s) returned to full function, and the justification for any extended maintenance/repair schedules (see Part 2.1.2.3);
- All inspection reports, including the Routine Facility Inspection Reports (see Part 4.1), the Quarterly Visual Assessment Reports (see Part 4.2), and the Comprehensive Site Inspection Reports (see Part 4.3);
- Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (e.g., adverse weather or it was impracticable to collect samples within the first 30 minutes of a measurable storm event) (see Parts 4.2.1, 6.1.4, and 6.2.1.2);
- Description of any corrective action taken at your site, including triggering event and dates when problems were discovered and modifications occurred;
- Documentation of any benchmark exceedances and how they were responded to, including either (1) corrective action taken, (2) a finding that the exceedance was due to natural background pollutant levels, or (3) a finding that no further pollutant reductions were technologically available and economically practicable and achievable in light of best industry practice consistent with Part 6.2.1.2;
- Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters, and that such pollutants were not detected in your discharge or were solely attributable to natural background sources (see Part 6.2.2.2); and
- Documentation to support your claim that your facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct routine facility inspections (see Part 4.1.3), quarterly visual assessments (see Part 4.2.3), and/or benchmark monitoring (see Part 6.2.1.3).

6. Monitoring.

You must collect and analyze stormwater samples and document monitoring activities consistent with the procedures described in Part 6 and Appendix B, Subsections B.2 – B.4, and any additional sector-specific requirements in Part 8. Refer to Part 7 for reporting and recordkeeping requirements.

6.1 Monitoring Procedures

6.1.1 Monitored Outfalls.

Applicable monitoring requirements apply to each outfall authorized by this permit, except as otherwise exempt from monitoring as a “substantially identical outfall.” If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of their drainage areas, you may monitor the effluent of just one of the outfalls and report that the results also apply to the substantially identical outfall(s). As required in Part 5.1.5.2, your SWPPP must identify each outfall authorized by this permit and describe the rationale for any substantially identical outfall determinations.

Areas of true sheet flow discharges are not required to be monitored as outfalls unless you are notified by the Department, though the discharge is regulated under this permit. It should be noted that what begins as "sheet flow" has a tendency to concentrate and form gullies, which would then be considered a discrete conveyance. (Monitored Outfall & Sheet Flow defined in Appendix A)

6.1.2 Commingled Discharges.

If discharges authorized by this permit commingle with discharges not authorized under this permit, any required sampling of the authorized discharges must be performed at a point before they mix with other waste streams, to the extent practicable.

6.1.3 Measurable Storm Events.

All required monitoring must be performed on a storm event that results in an actual discharge from your site ("measurable storm event") that follows the preceding measurable storm event by at least 72 hours (3 days). In the case of snowmelt, the monitoring must be performed at a time when a measurable discharge occurs at your site.

For each monitoring event, except snowmelt monitoring, you must identify the date and duration (in hours) of the rainfall event, rainfall total (in inches) for that rainfall event, and time (in days) since the previous measurable storm event. For snowmelt monitoring, you must identify the date of the sampling event and indicate that the sampling event was for snowmelt.

6.1.4 Sample Type.

You must take a minimum of one grab sample from a discharge resulting from a measurable storm event as described in Part 6.1.3 and a minimum of one grab sample from snowmelt, a total of four samples. Samples must be collected within the first 30 minutes of a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the SWPPP explaining why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge.

6.1.5 Adverse Weather Conditions.

When adverse weather conditions as described in Part 4.2.3 prevent the collection of samples according to the relevant monitoring schedule, you must take a substitute sample during the next qualifying storm event. Adverse weather does not exempt you from having to retain a benchmark monitoring report in accordance with your sampling schedule. You must document any failure to monitor as specified in Part 7.1 indicating the basis for not sampling during the usual reporting period.

6.1.6 Irregular Stormwater Runoff.

If your facility is located in semi-arid climate where limited rainfall occurs during parts of the year or due to freezing conditions that prevent runoff from occurring for extended periods, required monitoring events may be distributed during seasons when precipitation occurs, or when snowmelt results in a measurable discharge from your site. You must still collect the required number of samples.

6.1.7 Monitoring Periods.

Monitoring requirements in this permit begin in the first full quarter following either July 18, 2016 or your date of discharge authorization, whichever date comes later. If your monitoring is required on a quarterly basis (e.g., benchmark monitoring), you must monitor at least once in each of the following 3-month intervals:

- January 1 – March 31;
- April 1 – June 30;
- July 1 – September 30; and
- October 1 – December 31.

For example, if you obtain permit coverage on August 2, 2016, then your first monitoring quarter is October 1 - December 31, 2016. This monitoring schedule may be modified in accordance with Part 6.1.6 if the revised schedule is documented with your SWPPP.

6.1.8 Monitoring for Allowable Non-Stormwater Discharges

You are only required to monitor allowable non-stormwater discharges (as delineated in Part 1.1.3) when they are commingled with stormwater discharges associated with industrial activity.

6.1.9 Timing of Sample

All monitoring required in this permit should be conducted during the normal operating hours for the facility. When the collection of samples according to the relevant monitoring schedule is not possible due to the lack of a measurable storm event (as specified in Part 6.1.3) occurring during normal operating hours, you must take a substitute sample during the next qualifying storm event (which occurs during normal operating hours). Facilities which do not operate during rain events must consider normal operating hours to include such temporary shut downs due to rain events. (This may result in the collection of more than one sample during a quarter; the substitute sample and the scheduled sample must be collected from separate qualifying events.)

Facilities are not required to monitor outside of normal operating hours, but are not precluded from doing so at the discretion of the facility.

6.2 Required Monitoring.

This permit includes three types of required analytical monitoring, one or more of which may apply to your discharge:

- Quarterly benchmark monitoring (see Part 6.2.1)
- Impaired waters monitoring (see Part 6.2.2); and
- Other monitoring as required by NDEQ (see Part 6.2.3).

When more than one type of monitoring for the same parameter at the same outfall applies you may use a single sample to satisfy both monitoring requirements (i.e., one sample analysis satisfying both the impaired waters monitoring sample and one of the 4 quarterly benchmark monitoring samples).

All required monitoring must be conducted in accordance with the procedures described in Appendix B, Subsection B.3.3.

6.2.1 Benchmark Monitoring.

This permit stipulates pollutant benchmark concentrations that may be applicable to your discharge. The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. Benchmark monitoring data are primarily for your use to determine the overall effectiveness of your control measures and to assist you in knowing when additional corrective action(s) may be necessary to comply with the effluent limitations in Part 2.

6.2.1.1 Applicability of Benchmark Monitoring. You must monitor for any benchmark parameters specified for the industrial sector(s), both primary industrial activity and any co-located industrial activities, applicable to your discharge. Your industry-specific benchmark concentrations are listed in the sector-specific sections of Part 8. If your facility is in one of the industrial sectors subject to benchmark concentrations that are hardness-dependent, you are required to retain with

your first benchmark report a hardness value, established consistent with the procedures in Appendix E, which is representative of your receiving water.

Samples must be analyzed consistent with 40 CFR Part 136 analytical methods and using test procedures with quantitation limits at or below benchmark values for all benchmark parameters for which you are required to sample.

Industrial facilities are not required to repeat their initial benchmark monitoring unless there is a change in the industrial process that is expected to impact the stormwater discharge.

6.2.1.2 Benchmark Monitoring Schedule. Benchmark monitoring must be conducted quarterly, as identified in Part 6.1.7, for your first 4 full quarters of permit coverage commencing no earlier than July 18, 2016. Facilities with irregular stormwater runoff, as described in Part 6.1.6, may modify this quarterly schedule provided that this revised schedule is documented when the first benchmark sample is collected, and that this revised schedule is kept with the facility's SWPPP as specified in Part 5.4.

Data not exceeding benchmarks: After collection of 4 quarterly samples, if the average of the 4 monitoring values for any parameter does not exceed the benchmark, you have fulfilled your monitoring requirements for that parameter for the permit term. For averaging purposes, use a value of zero for any individual sample parameter, analyzed using procedures consistent with Part 6.2.1.1, which is determined to be less than the method detection limit. For sample values that fall between the method detection level and the quantitation limit (i.e., a confirmed detection but below the level that can be reliably quantified), use a value halfway between zero and the quantitation limit.

Data exceeding benchmarks: After collection of 4 quarterly samples, if the average of the 4 monitoring values for any parameter exceeds the benchmark, you must, in accordance with Part 3.2, review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until you have completed 4 additional quarters of monitoring for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent limitations in Parts 2 of this permit, in which case you must continue monitoring once per year. You must also document your rationale for concluding that no further pollutant reductions are achievable, and retain all records related to this documentation with your SWPPP. You must also notify NDEQ of this determination by submitting all benchmark monitoring reports along with the rationale for this determination. NDEQ may contact you regarding this determination and request additional information or deny the determination.

In accordance with Part 3.2, you must review your control measures and perform any required corrective action immediately (or document why no corrective action is required), without waiting for the full 4 quarters of monitoring data, if an exceedance of the 4 quarter average is mathematically certain. If after modifying your control measures and conducting 4 additional quarters of monitoring, your average still exceeds the benchmark (or if an exceedance of the benchmark by the 4 quarter average is mathematically certain prior to conducting the full 4 additional quarters of monitoring), you must again review your control measures and take one of the two actions above.

Natural background pollutant levels: Following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data, see above), if the average concentration of a pollutant exceeds a benchmark value, and you determine that exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background, you are not required to perform corrective action or additional benchmark monitoring provided that:

- The average concentration of your benchmark monitoring results is less than or equal to the concentration of that pollutant in the natural background;
- You document and maintain with your SWPPP, as required in Part 5.4, your supporting rationale for concluding that benchmark exceedances are in fact attributable solely to natural background pollutant levels. You must include in your supporting rationale any data previously collected by you or others (including literature studies) that describe the levels of natural background pollutants in your stormwater discharge; and
- You notify NDEQ with your determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice that the benchmark exceedances are attributable solely to natural background pollutant levels.

Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources which are not naturally occurring.

6.2.1.3 *Exception for Inactive and Unstaffed Sites.* The requirement for benchmark monitoring does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. To invoke this exception, you must do the following:

- Maintain a statement onsite with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater in accordance with the substantive requirements in Title 119, Chapter 10 Part 007.04C and sign and certify the statement in accordance with Appendix B, Subsection B.2; and
- If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements under Part 6.2 as if you were in your first year of permit coverage. You must indicate in your first benchmark monitoring report that your facility has materials or activities exposed to stormwater or has become active and/or staffed.
- If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must maintain a statement onsite with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater in accordance with the substantive requirements in Title 119, Chapter 10 Part 007.04C and sign and certify the statement in accordance with Appendix B, Subsection B.2. You may discontinue benchmark monitoring once you have prepared and signed the certification statement described above concerning your facility's qualification for this special exception.

Note: This exception has different requirements for Sectors G, H, and J (see Part 8).

6.2.2 Discharges to Impaired Waters Monitoring.

6.2.2.1 *Permittees Required to Monitor Discharges to Impaired Waters.* If you discharge to an impaired water, you must monitor for all pollutants for which the waterbody is impaired and for which a standard analytical method exists in Title 119, Chapter 14 Part 001.02D (see 40 CFR Part 136).

No monitoring is required when a waterbody's biological communities are impaired but no pollutant, including indicator or surrogate pollutants, is specified as causing the impairment, or when a waterbody's impairment is related to hydrologic modifications, impaired hydrology, or temperature.

6.2.2.2 *Impaired Waters Monitoring Schedule.*

Discharges to impaired waters without an EPA approved or established TMDL: Beginning in the first full quarter following July 1, 2017 or your date of discharge authorization, whichever date comes later, you must monitor once per year at each outfall (except substantially identical outfalls) discharging stormwater to impaired waters without an EPA approved or established TMDL. This monitoring requirement does not apply after one year if the pollutant for which the waterbody is impaired is not detected above natural background levels in your stormwater discharge, and you document, as required in Part 5.4 (Additional Documentation Requirements), that this pollutant is not expected to be present above natural background levels in your discharge.

If the pollutant for which the water is impaired is not present and not expected to be present in your discharge, or it is present but you have determined that its presence is caused solely by natural background sources, you are required to submit a notification to this effect to NDEQ, after which you may discontinue annual monitoring. To support a determination that the pollutant's presence is caused solely by natural background sources, you must keep the following documentation with your SWPPP records:

- An explanation of why you believe that the presence of the pollutant causing the impairment in your discharge is not related to the activities at your facility; and
- Data and/or studies that tie the presence of the pollutant causing the impairment in your discharge to natural background sources in the watershed.

Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources which are not naturally occurring.

Discharges to impaired waters with an EPA approved or established TMDL: For stormwater discharges to waters for which there is an EPA approved or established TMDL, you are not required to monitor for the pollutant for which the TMDL was written unless NDEQ informs you, upon examination of the applicable TMDL and/or WLA, that you are subject to such a requirement consistent with the assumptions of the applicable TMDL and/or WLA. NDEQ's notice will include specifications on which pollutant to monitor and the required monitoring frequency during the first year of permit coverage. Following the first year of monitoring:

- If the TMDL pollutant is not detected in any of your first year samples, you may discontinue further sampling, unless the TMDL has specific instructions to the contrary, in which case you must follow those instructions. You must keep records of this finding onsite with your SWPPP.
- If you detect the presence of the pollutant causing the impairment in your stormwater discharge for any of the samples collected in your first year, you must continue monitoring annually throughout the term of this permit, unless the TMDL specifies more frequent monitoring, in which case you must follow the TMDL requirements.

6.2.3 *Additional Monitoring Required by NDEQ.*

NDEQ may notify you of additional discharge monitoring requirements. Any such notice will briefly state the reasons for the monitoring, locations, and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements.

7. Reporting and Recordkeeping

7.1 Reporting Monitoring Data to NDEQ.

All monitoring data collected pursuant to Parts 6.2 must be maintained with the SWPPP after you have received your complete laboratory results for all monitored outfalls for the reporting period. Upon request by NDEQ, paper reporting forms must be submitted within fourteen days to the appropriate address identified in Part 7.4.1. NDEQ strongly recommends that you use the ISW storm event monitoring report (ISW-SEMR) available as an attachment to this permit.

7.2 Additional Reporting.

In addition to the reporting requirements stipulated in Part 7, you are also subject to the standard permit reporting provisions of Appendix B, Subsection B.4.

Where applicable, you must submit the following reports to NDEQ at the address listed in Part 7.4.1. If you discharge through an MS4, you must also submit these reports to the MS4 operator (if required or requested by the MS4).

- 24-hour reporting (see Appendix B, Subsection B.4.8) – You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances;
- 5-day follow-up reporting to the 24 hour reporting (see Appendix B, Subsection B.4.8) – A written submission must also be provided within five days of the time you become aware of the circumstances;
- Reportable quantity spills (see Part 2.1.2.4) – You must provide notification, as required under Part 2.1.2.4, as soon as you have knowledge of a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity.

Where applicable, you must submit the following reports to NDEQ at the appropriate address in Part 7.4.1:

- Planned changes (see Appendix B, Subsection B.4.1) – You must give notice to NDEQ as soon as possible of any planned physical alterations or additions to the permitted facility that qualify the facility as a new source or that could significantly change the nature or significantly increase the quantity of pollutants discharged;
- Anticipated noncompliance (see Appendix B, Subsection B.4.2) – You must give advance notice to NDEQ of any planned changes in the permitted facility or activity which you anticipate will result in noncompliance with permit requirements;
- Transfer of ownership and/or operation – You must submit a complete and accurate NOI in accordance with the requirements of Attachment 2 of this permit and by the deadlines specified in Table 1-2;
- Compliance schedules (see Appendix B, Subsection B.4.8) – Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date;
- Other noncompliance (see Appendix B, Subsection B.4.10) – You must report all instances of noncompliance not reported in your monitoring report (pursuant to Part 7.1), compliance schedule report, or 24-hour report at the time monitoring reports are submitted; and
- Other information (see Appendix B, Subsection B.4.11) – You must promptly submit facts or information if you become aware that you failed to submit relevant facts in your NOI, or that you submitted incorrect information in your NOI or in any report.

7.3 Recordkeeping.

You must retain copies of your SWPPP (including any modifications made during the term of this permit), additional documentation requirements pursuant to Part 5.4 (including documentation related to corrective actions taken pursuant to Part 3), all reports and certifications required by this permit, monitoring data, and records of all data used to complete the NOI to be covered by this permit, for a period of at least 3 years from the date that your coverage under this permit expires or is terminated.

7.4 Addresses for Reports

7.4.1 NDEQ Addresses

Paper copies of any reports required in Part 6 and 7 must be sent to the following address:

Via U.S. mail:

Nebraska Department of Environmental Quality
Water Quality Division, Industrial Storm Water
PO Box 98922
Lincoln, NE 68509-8922

7.4.2 Submissions to MS4s

If required or upon request, copies of all required submissions to NDEQ shall be concurrently submitted to the appropriate Combined Sewer (CS), or Municipal Separate Storm Sewer Systems (MS4s) operator. A list of permitted Municipal Separate Storm Sewer Systems (MS4s) is attached as Attachment 6. The contact information provided may not be the appropriate or most current contact information for required submissions. The MS4 operator should be contacted for the appropriate address.

Permittees located within a CS or MS4 shall contact the operator at the time of application to determine if submissions are required to the CS or MS4. The operator has discretion to determine if they would like to receive the concurrent submissions, and for which documents a concurrent submission is required. The CS or MS4 operator has discretion to modify their policies during the term of the permit by notifying affected permittees.

8. Sector-Specific Requirements for Industrial Activity

8.A. Sector A – Timber Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.A.1 Covered Stormwater Discharges.

The requirements in Subpart A apply to stormwater discharges associated with industrial activity from Timber Products facilities as identified by the SIC Codes specified under Sector A in Table D-1 of Appendix D of the permit.

8.A.2 Limitation on Coverage

8.A.2.1 Prohibition of Discharges. (See also Part 1.1.4) Not covered by this permit: stormwater discharges from areas where there may be contact with the chemical formulations sprayed to provide surface protection. These discharges must be covered by a separate NPDES permit.

8.A.7 Effluent Limitations Based on Effluent Limitations Guidelines

This General Permit does not authorize discharges resulting from spray-down or intentional wetting of logs at wet deck storage areas. These discharges must be covered by a separate NPDES permit.

8.B Sector B – Paper and Allied Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.B.1 Covered Stormwater Discharges.

The requirements in Subpart B apply to stormwater discharges associated with industrial activity from Paper and Allied Products Manufacturing facilities, as identified by the SIC Codes specified under Sector B in Table D-1 of Appendix D of the permit.

8.B.2 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.B-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector B1. Paperboard Mills (SIC Code 2631)	Chemical Oxygen Demand (COD)	120.0 mg/L

8.C Sector C – Chemical and Allied Products Manufacturing, and Refining.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.C.1 Covered Stormwater Discharges.

The requirements in Subpart C apply to stormwater discharges associated with industrial activity from Chemical and Allied Products Manufacturing, and Refining facilities, as identified by the SIC Codes specified under Sector C in Table D-1 of Appendix D of the permit.

8.C.2 Limitations on Coverage.

8.C.2.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.1.4) The following are not covered by this permit: non-stormwater discharges containing inks, paints, or substances (hazardous, nonhazardous, etc.) resulting from an onsite spill, including materials collected in drip pans; washwater from material handling and processing areas; and washwater from drum, tank, or container rinsing and cleaning.

8.C.3 Sector-Specific Benchmarks

Table 8.C-1 identifies benchmarks that apply to the specific subsectors of Sector C. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.C-1		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector C1. Agricultural Chemicals (SIC 2873-2879)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Lead ¹	Hardness Dependent
	Total Iron	1.0 mg/L
	Total Zinc ¹	Hardness Dependent
	Phosphorus	2.0 mg/L
Subsector C2. Industrial Inorganic Chemicals (SIC 2812-2819)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Subsector C3. Soaps, Detergents, Cosmetics, and Perfumes (SIC 2841-2844)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Zinc ¹	Hardness Dependent
Subsector C4. Plastics, Synthetics, and Resins (SIC 2821-2824)	Total Zinc ¹	Hardness Dependent
Subsector C5. Industrial Organic Chemicals (SIC 2861-2869)	Total Suspended Solids (TSS)	100 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Ammonia	10 mg/L

¹ The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix E, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	Lead (mg/L)	Zinc (mg/L)
0-25 mg/L	0.014	0.04
25-50 mg/L	0.023	0.05
50-75 mg/L	0.045	0.08
75-100 mg/L	0.069	0.11
100-125 mg/L	0.095	0.13
125-150 mg/L	0.122	0.16
150-175 mg/L	0.155	0.18
175-200 mg/L	0.182	0.20
200-225 mg/L	0.213	0.23
225-250 mg/L	0.246	0.25
250+ mg/L	0.262	0.26

8.N Sector N – Scrap Recycling and Waste Recycling Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.N.1 Covered Stormwater Discharges.

The requirements in Subpart N apply to stormwater discharges associated with industrial activity from Scrap Recycling and Waste Recycling facilities as identified by the SIC Code specified under Sector N in Table D-1 of Appendix D of the permit.

8.N.2 Limitation on Coverage.

Separate permit requirements have been established for recycling facilities that only receive source-separated recyclable materials primarily from non-industrial and residential sources (i.e., common consumer products including paper, newspaper, glass, cardboard, plastic containers, and aluminum and tin cans). This includes recycling facilities commonly referred to as material recovery facilities (MRF).

- 8.N.2.1 Prohibition of Non-Stormwater Discharges.** (See also Part 1.1.4) Non-stormwater discharges from turnings containment areas are not covered by this permit (see also Part 8.N.3.2.3). Discharges from containment areas in the absence of a storm event are prohibited unless covered by a separate NPDES permit.

8.N.3 Additional Technology-Based Effluent Limits.

- 8.N.3.1 Scrap and Waste Recycling Facilities** (Non-Source Separated, Nonliquid Recyclable Materials). Requirements for facilities that receive, process, and do wholesale distribution of nonliquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). These facilities may receive both nonrecyclable and recyclable materials. This section is not intended for those facilities that accept recyclables only from primarily non-industrial and residential sources.

8.N.3.1.1 Inbound Recyclable and Waste Material Control Program. Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials. Following are some control measure options: (a) provide information and education to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches from vehicles before delivery to your facility; (b) establish procedures to minimize the potential of any residual fluids from coming into contact with precipitation or runoff; (c) establish procedures for accepting scrap lead-acid batteries (additional requirements for the handling, storage, and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in Part 8.N.3.2.6); (d) provide training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials; and (e) establish procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and are disposed of or recycled in accordance with the Resource Conservation and Recovery Act (RCRA).

- 8.N.3.1.2 *Scrap and Waste Material Stockpiles and Storage (Outdoor)*. Minimize contact of stormwater runoff with stockpiled materials, processed materials, and non-recyclable wastes. Following are some control measure options: (a) permanent or semi-permanent covers; (b) sediment traps, vegetated swales and strips, catch basin filters, and sand filters to facilitate settling or filtering of pollutants; (c) dikes, berms, containment trenches, culverts, and surface grading to divert runoff from storage areas; and (d) oil and water separators, sumps, and dry absorbents for areas where potential sources of residual fluids are stockpiled (e.g., automobile engine storage areas).
- 8.N.3.1.3 *Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage)*. Minimize contact of surface runoff with residual cutting fluids by: (a) storing all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover, or (b) establishing dedicated containment areas for all turnings that have been exposed to cutting fluids. Any containment areas must be constructed of concrete, asphalt, or other equivalent types of impermeable material and include a barrier (e.g., berms, curbing, elevated pads) to prevent contact with stormwater run-on. Stormwater runoff from these areas can be discharged, provided that any runoff is first collected and treated by an oil and water separator or its equivalent. You must regularly maintain the oil and water separator (or its equivalent) and properly dispose of or recycle collected residual fluids.
- 8.N.3.1.4 *Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage)*. Minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff. Following are some control measure options: (a) good housekeeping measures, including the use of dry absorbents or wet vacuuming to contain, dispose of, or recycle residual liquids originating from recyclable containers, or mercury spill kits for spills from storage of mercury switches; (b) not allowing washwater from tipping floors or other processing areas to discharge to the storm sewer system; and (c) all floor drains connected to the storm sewer system should be disconnected or sealed off.
- 8.N.3.1.5 *Scrap and Recyclable Waste Processing Areas*. Minimize surface runoff from coming in contact with scrap processing equipment. Pay attention to operations that generate visible amounts of particulate residue (e.g., shredding) to minimize the contact of accumulated particulate matter and residual fluids with runoff (i.e., through good housekeeping, preventive maintenance, etc.). Following are some control measure options: (a) regularly inspect equipment for spills or leaks and malfunctioning, worn, or corroded parts or equipment; (b) establish a preventive maintenance program for processing equipment; (c) use dry-absorbents or other cleanup practices to collect and dispose of or recycle spilled or leaking fluids or use mercury spill kits for spills from storage of mercury switches; (d) on unattended hydraulic reservoirs over 150 gallons in capacity, install protection devices such as low-level alarms or equivalent devices, or secondary containment that can hold the entire volume of the reservoir; (e) containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of stormwater runoff with outdoor processing equipment or stored materials; (f) oil and water separators or sumps; (g) permanent or semi-permanent covers in processing areas where there are residual fluids and grease; (h) retention or detention ponds or basins; sediment traps, and vegetated swales or strips (for pollutant settling and filtration); (i) catch basin filters or sand filters.

- 8.N.3.1.6 *Scrap Lead-Acid Battery Program.* Properly handle, store, and dispose of scrap lead-acid batteries. Following are some control measure options (a) segregate scrap lead-acid batteries from other scrap materials; (b) properly handle, store, and dispose of cracked or broken batteries; (c) collect and dispose of leaking lead-acid battery fluid; (d) minimize or eliminate (if possible) exposure of scrap lead-acid batteries to precipitation or runoff; and (e) provide employee training for the management of scrap batteries.
- 8.N.3.1.7 *Spill Prevention and Response Procedures.* (See also Part 2.1.2.4) Install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.
- 8.N.3.1.8 *Supplier Notification Program.* As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.
- 8.N.3.2 Waste Recycling Facilities (Liquid Recyclable Materials).**
- 8.N.3.2.1 *Waste Material Storage (Indoor).* Minimize or eliminate contact between residual liquids from waste materials stored indoors and from surface runoff. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Control, and Countermeasure (SPCC) plans required under 40 CFR Part 112. Following are some control measure options (a) procedures for material handling (including labeling and marking); (b) clean up spills and leaks with dry absorbent materials, a wet vacuum system; (c) appropriate containment structures (trenching, curbing, gutters, etc.); and (d) a drainage system, including appurtenances (e.g., pumps or ejectors, manually operated valves), to handle discharges from diked or bermed areas. Drainage should be discharged to an appropriate treatment facility or sanitary sewer system, or otherwise disposed of properly. These discharges may require coverage under a separate NPDES wastewater permit or industrial user permit under the pretreatment program.
- 8.N.3.2.2 *Waste Material Storage (Outdoor).* Minimize contact between stored residual liquids and precipitation or runoff. The plan may refer to applicable portions of other existing plans, such as SPCC plans required under 40 CFR Part 112. Discharges of precipitation from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112. Following are some control measure options (a) appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest tank, with sufficient extra capacity for precipitation; (b) drainage control and other diversionary structures; (c) corrosion protection and/or leak detection systems for storage tanks; and (d) dry-absorbent materials or a wet vacuum system to collect spills.
- 8.N.3.2.3 *Trucks and Rail Car Waste Transfer Areas.* Minimize pollutants in discharges from truck and rail car loading and unloading areas. Include measures to clean up minor spills and leaks resulting from the transfer of liquid wastes. Following are two control measure options: (a) containment and diversionary structures to minimize contact with precipitation or runoff, and (b) dry clean-up methods, wet vacuuming, roof coverings, or runoff controls.

8.N.3.3 Recycling Facilities (Source-Separated Materials). The following identifies considerations for facilities that receive only source-separated recyclables, primarily from non-industrial and residential sources.

- 8.N.3.3.1 Inbound Recyclable Material Control.** Minimize the chance of accepting non-recyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials. Following are some control measure options: (a) providing information and education measures to inform suppliers of recyclables about acceptable and non-acceptable materials, (b) training drivers responsible for pickup of recycled material, (c) clearly marking public drop-off containers regarding which materials can be accepted, (d) rejecting non-recyclable wastes or household hazardous wastes at the source, and (e) establishing procedures for handling and disposal of non-recyclable material.
- 8.N.3.3.2 Outdoor Storage.** Minimize exposure of recyclables to precipitation and runoff. Use good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas. Following are some control measure options (a) provide totally enclosed drop-off containers for the public; (b) install a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; (c) provide dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper); (d) divert surface water runoff away from outside material storage areas; (e) provide covers over containment bins, dumpsters, and roll-off boxes; and (f) store the equivalent of one day's volume of recyclable material indoors.
- 8.N.3.3.3 Indoor Storage and Material Processing.** Minimize the release of pollutants from indoor storage and processing areas. Following are some control measure options (a) schedule routine good housekeeping measures for all storage and processing areas, (b) prohibit tipping floor washwater from draining to the storm sewer system, and (c) provide employee training on pollution prevention practices.
- 8.N.3.3.4 Vehicle and Equipment Maintenance.** Following are some control measure options for areas where vehicle and equipment maintenance occur outdoors (a) prohibit vehicle and equipment washwater from discharging to the storm sewer system, (b) minimize or eliminate outdoor maintenance areas whenever possible, (c) establish spill prevention and clean-up procedures in fueling areas, (d) avoid topping off fuel tanks, (e) divert runoff from fueling areas, (f) store lubricants and hydraulic fluids indoors, and (g) provide employee training on proper handling and storage of hydraulic fluids and lubricants.

8.N.4 Additional SWPPP Requirements.

8.N.4.1 Drainage Area Site Map. (See also Part 5.1.2) Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: scrap and waste material storage, outdoor scrap and waste processing equipment; and containment areas for turnings exposed to cutting fluids.

8.N.4.2 Maintenance Schedules/Procedures for Collection, Handling, and Disposal or Recycling of Residual Fluids at Scrap and Waste Recycling Facilities. If you are subject to Part 8.N.3.1.3, your SWPPP must identify any applicable maintenance schedule and the procedures to collect, handle, and dispose of or recycle residual fluids.

8.N.5 Additional Inspection Requirements.

8.N.5.1 Inspections for Waste Recycling Facilities. The inspections must be performed quarterly, pursuant to Part 4.1, and include, at a minimum, all areas where waste is generated, received, stored, treated, or disposed of and that are exposed to either precipitation or stormwater runoff.

8.N.6 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.N-1		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector N1. Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling (SIC 5093)	Chemical Oxygen Demand (COD)	120 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Total Recoverable Aluminum	0.75 mg/L
	Total Recoverable Copper ¹	Hardness Dependent
	Total Recoverable Iron	1.0 mg/L
	Total Lead ¹	Hardness Dependent
	Total Recoverable Zinc ¹	Hardness Dependent

¹ The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix E, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	Copper (mg/L)	Lead (mg/L)	Zinc (mg/L)
0-25 mg/L	0.0038	0.014	0.04
25-50 mg/L	0.0056	0.023	0.05
50-75 mg/L	0.0090	0.045	0.08
75-100 mg/L	0.0123	0.069	0.11
100-125 mg/L	0.0156	0.095	0.13
125-150 mg/L	0.0189	0.122	0.16
150-175 mg/L	0.0221	0.151	0.18
175-200 mg/L	0.0253	0.182	0.20
200-225 mg/L	0.0285	0.213	0.23
225-250 mg/L	0.0316	0.246	0.25
250+ mg/L	0.0332	0.262	0.26

8.O Sector O – Steam Electric Generating Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

Notice of Potential National Pollution Discharge Elimination System (NPDES) PERMIT VIOLATIONS

Permittee (facility) Name and Address:

Big Ox Energy Siouxland
1616 D Avenue
South Sioux City, NE 68776

NPDES Permit Number:

WER 910000

During the Clean Water Act § 308 compliance inspection conducted on Jan. 10-11, 2017
the potential NPDES permit violations noted below were found. Additional violations may be brought to
your attention following a complete review of the inspection report and other available information.

POTENTIAL NPDES PERMIT VIOLATIONS

The permittee was unable to provide documentation
required under the Nebraska general industrial stormwater
permit for compliance with the following required elements
of their stormwater plan:

Quarterly stormwater benchmark monitoring (4th Q 2016)
Quarterly site inspection (4th Q 2016)
Quarterly visual discharge assessment (4th Q 2016)

REQUESTED ACTION: Within ten (10) days, please describe in writing any actions taken, or planned, to
correct the potential violations identified above. Your response will be considered in the determination of
the need for further administrative or legal action. Mail your description of corrective actions to your
inspector at:

U.S. Environmental Protection Agency
ENSV/EMWC
901 North 5th Street 300 Minnesota Ave.
Kansas City, Kansas 66101-2907

Inspector's printed name:

Peter M Green

Inspector's signature:

Peter M Green

Notice received by:

(name & title)

Jac O'NEILL DIRECTOR OF ENGINEERING

Date:

01-11-2017

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CONFIDENTIALITY NOTICE

Facility Name <i>Big Ox Energy Siouxland</i>	
Facility Address <i>1616 D Avenue South Sioux City, NE 68776</i>	
Inspector (print) <i>Peter M Green</i>	
U.S. EPA, Region VII, 901 N. 5th St., Kansas City, KS 66101	Date <i>01-11-2017</i>

The United States Environmental Protection Agency (EPA) is obligated, under the Freedom of Information Act, to release information collected during inspections to persons who submit requests for that information. The Freedom of Information Act does, however, have provisions that allow EPA to withhold certain confidential business information from public disclosure. To claim protection for information gathered during this inspection you must request that the information be held CONFIDENTIAL and substantiate your claim in writing by demonstrating that the information meets the requirements in 40 CFR 2, Subpart B. The following criteria in Subpart B must be met:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.
2. No statute specifically requires disclosure of the information.
3. Disclosure of the information would cause substantial harm to your company's competitive position.

Information that you claim confidential will be held as such pending a determination of applicability by EPA.

I have received this Notice and <u>DO NOT</u> want to make a claim of confidentiality at this time.	
Facility Representative Provided Notice (print) <i>TASON OSBORN</i>	Signature/Date <i>TASON OSBORN 11/11/17</i>

I have received this Notice and <u>DO</u> want to make a claim of confidentiality.	
Facility Representative Provided Notice (print) <i>TASON OSBORN</i>	Signature/Date <i>TASON OSBORN 11/11/17</i>

Information for which confidential treatment is requested:

PROCESS FLOW DIAGRAM

PID FOR PROCESS FLOW DIAGRAM

Attachment 7

Photographs 8 through 16 determined to be

Confidential Business Information

ATTACHMENT 7

Big Ox Energy

South Sioux City, Nebraska

Industrial User Inspection

Photos taken by Pete Green

EPA Region VII

January 10-11, 2017

Photo Log

<u>File Name</u>	<u>Date/Time</u>	<u>Orientation</u>	<u>Subject</u>
IMG_4723	1/10/17 2:06	NW	Sludge tanker inside BOE plant, being loaded with solid sludge from digester centrifuge
IMG_4724	1/10/17 2:45	ENE	BOE plant; Dissolved Air Flotation (DAF) Tank (Gas Energy Mixing, or GEM)
IMG_4725	1/10/17 2:45	E	BOE plant; Effluent Discharge pit where composite sampler draws from.
IMG_4726	1/10/17 2:46	E	BOE plant; Refrigerated, flow-compositing automatic effluent sampler (Distributor arm got stuck when power was interrupted).
IMG_4727	1/10/17 2:53	NNE	BOE plant; Receiving bay for trucked-in liquid industrial wastes
IMG_4728	1/10/17 2:57	N	BOE; Industrial waste (whey) being discharged into north receiving pit from tanker in previous photo
IMG_4729	1/10/17 3:23	E	BOE plant; West wall of primary anaerobic digester, with valving (E).
IMG_4730	1/10/17 3:24	NW	BOE plant; One of two centrifuges used to dewater digested wastes
IMG_4731	1/11/17	W	CHS Facility; Loadout area for okara (a solid byproduct)
IMG_4732	1/11/17	W	CHS; Second tanker being loaded
IMG_4733	1/11/17	NW	CHS; Closed circuit camera used to monitor okara loadout operations
IMG_4734	1/11/17	SSW	CHS; "Kidney loop" on pH neutralization tank (newly insulated to prevent freezing).
IMG_4735	1/11/17	W	CHS; Refrigerated automatic composite sampler.
DSC01507	1/11/17	NNE	Bennet Street Lift Station
DSC01508	1/11/17	S	Wet Well at Bennet Lift Station, with rubberized cover and vents with activated carbon filters.
DSC01509	1/11/17	SW	Foundry Lift Station; Wet well with degreaser drip
DSC01510	1/11/17		Placard on degreaser drum
DSC01511	1/11/17	SW	Grab sample of BOE's DAF Effluent.

Photos were taken by Pete Green, EPA R7, with camera furnished by Curtis Christiansen, NDEQ.

IMG_4723 through IMG_4730 were downloaded from the camera by Pete Green. IMG_4731 through IMG_4735 were downloaded by Lantz Tipton. DSC01507 through DSC01511 were downloaded by Curt Christiansen and sent as electronic files to Lantz Tipton, EPA R7.



1. Hydrogen peroxide tank and injection equipment for gravity sewer below ADM industrial facility (N).



2. ADM Alliance Nutrition facility in South Sioux City (NW)



3. Temporary lift station for industrial wastewater from Roth Industrial Park, northeast of G Avenue & Highway 20 (SE)



4. Bennet Lift Station (NNE)



5. Wet Well at Bennet Lift Station, with rubberized cover and vents with activated carbon filters. (S)

SAFE HARBOR

GO II

**All Natural - Environmentally Safe - Non Acid - Non Corrosive
Non Caustic - Safe on Metal Pipes - Generates No Heat**

This compound may degrade some plastics, paints, or adhesives. Test small area before applying onto mentioned surfaces.
Continued use in plastic pipes may cause deterioration of plastic cement.


PRECAUTIONARY STATEMENTS (GHS-US): Keep away from heat, open flames, sparks. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof lighting, ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist, vapors. Wash hands and forearms thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear eye protection, face protection, protective gloves, protective clothing. If swallowed: Immediately call a POISON CENTER, a doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do NOT induce vomiting. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use alcohol resistant foam, BC-powder, carbon dioxide (CO2), sand to extinguish. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with Local, State, and Federal regulations.


HAZARD STATEMENTS (GHS-US): Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

CONTAINS: distillates, hydrotreated light, (+)-limonene

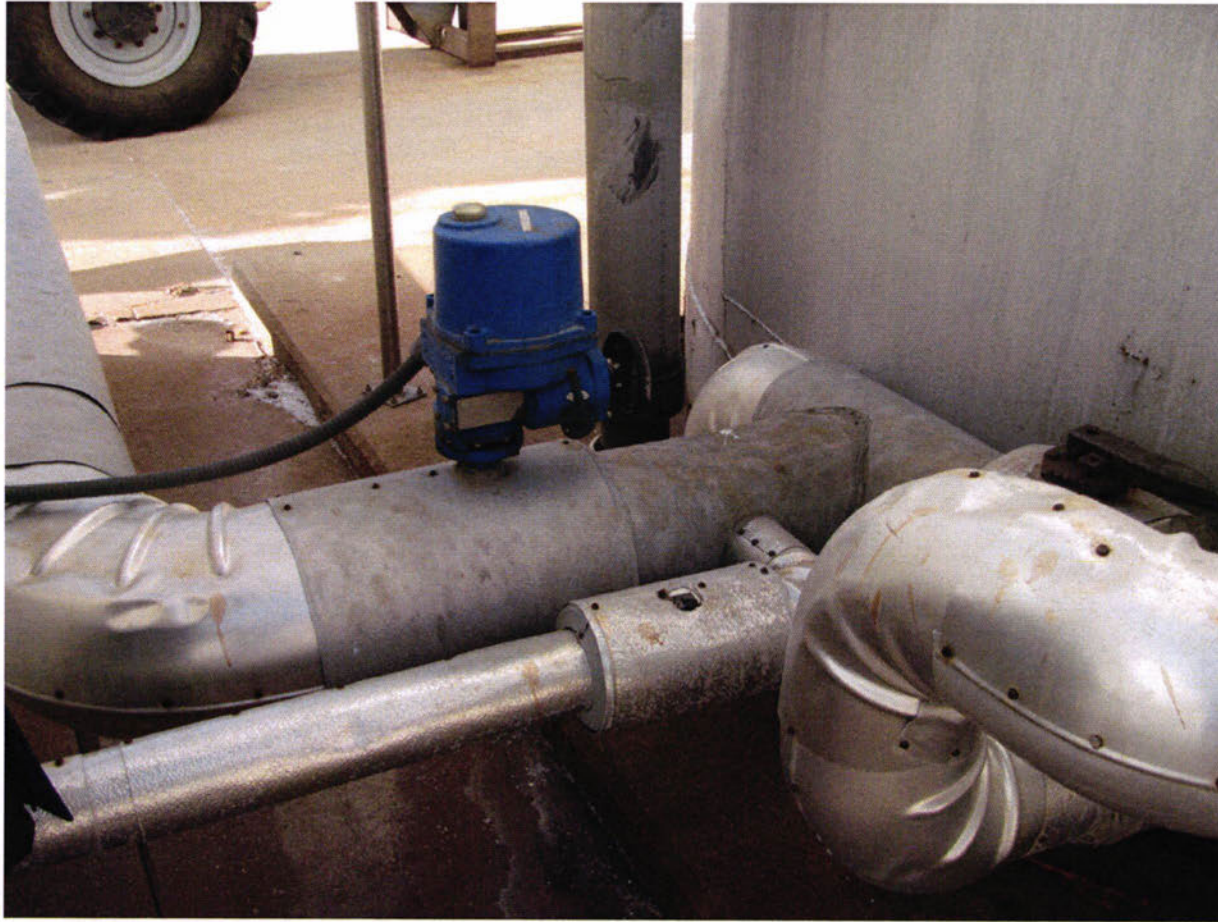
FOR EMERGENCIES PLEASE CALL:
CHEMTEL:
1-800-255-3924

DANGER: KEEP OUT OF REACH OF CHILDREN

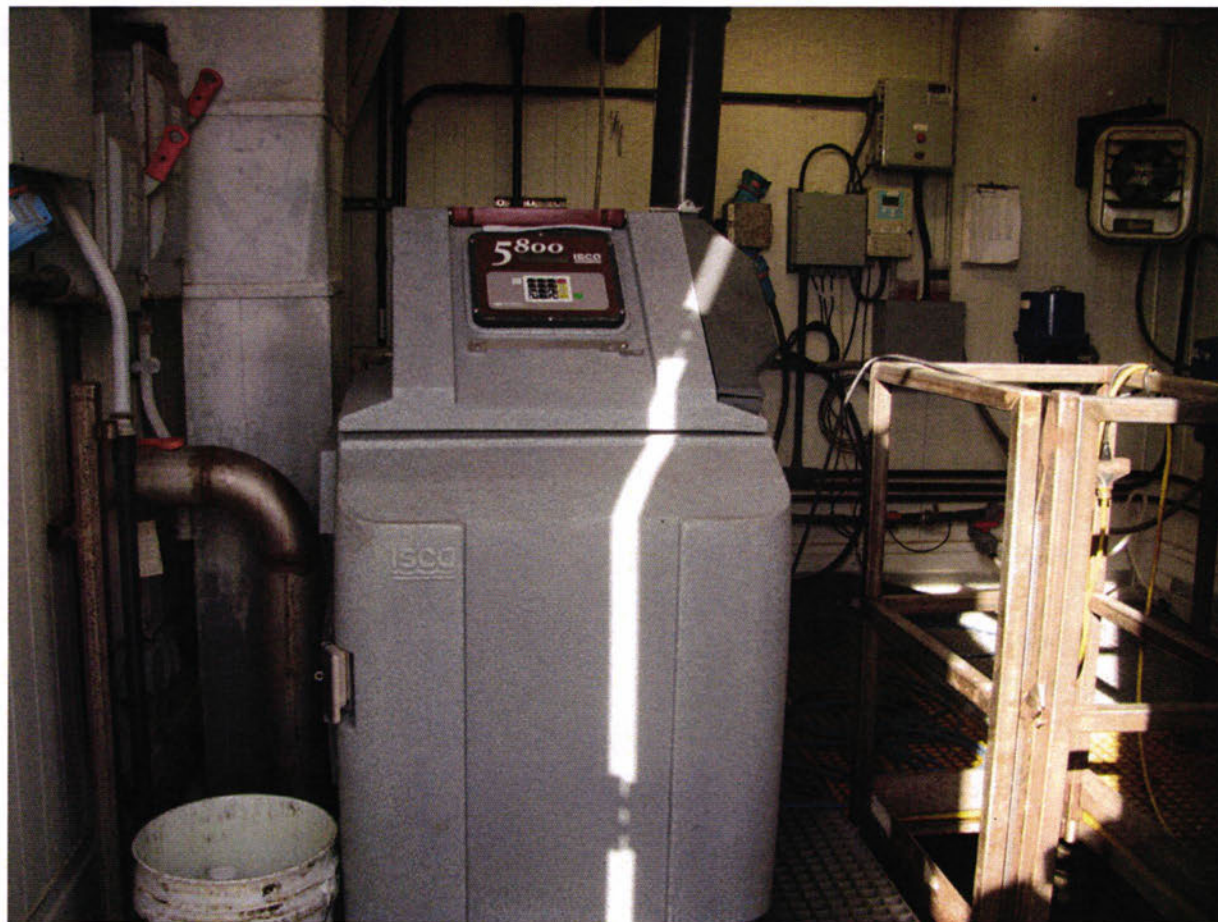

GHS02 GHS07 GHS08

 **transchem**
17616 Los Morros
Rancho Santa Fe, CA 92067-1489

7. Placard on drum of degreaser (N)



17. "Kidney loop" on pH neutralization tank, with newly-installed insulation to prevent freezing (SSW).



18. CHS; Refrigerated automatic composite sampler (W)

Forward To: EJ ☐ EPCRA/RMP/TSCA ☒ CWA ☐ Wetlands ☐ UIC ☐ PWS ☐ CAA/CFC ☐ RCRA ☐ UST ☐ SPCC ☐

REGION VII MULTIMEDIA SCREENING CHECKLIST

Facility Name: Big Ox Energy Siouxland Inspector: P. Green
 Facility Ownership: Big Ox Energy Primary Media: NPDES
 Street: 1616 D Avenue Inspector Phone Ext.: x 7343
 City: South Sioux City State: IA Zip: 68776 Date: 01/10/2017
 Phone: 920-863-3043 Facility Contact: Jason Osbahr, Plant Engineer SIC/NAICS Code: 2869
 Number of Employees: 35-38 Work Hours/Shifts: 24/7 Facility Subject to OSHA regulations Yes ☒ No ☐

Main facility activity, major process chemical(s) & description: Facility takes trucked-in waste from nearby Tyson plant (poultry manure) and other industries, and piped-in industrial wastewater. Wastestreams are anaerobically digested to produce methane for market.

(Check all that apply): painting/coating (water-based ☐, solvent-based ☐) , printing ☐ , reacting ☐ , formulating ☐ , distilling ☐ ,
 water treatment ☒ , refrigeration ☐ , manufacturing ☐ , parts washers/degreasing (water-based ☐ , halogenated-based ☐ ,
 non-halogenated-based ☐ , combustion (boiler, furnaces, oxidizers) ☐ plating (chrome ☐ , other _____).

ENVIRONMENTAL JUSTICE (Note: Forward to EJ if a concern is identified during your inspection)

1. Is the facility located in an apparent low income area (e.g., with many abandoned and dilapidated properties)? No ☒ (stop) Yes ☐ (Industrial Area)
 If yes, is facility less than 1000 feet from nearest routinely occupied property (house, school, etc.)? No ☐ (stop) Yes ☐ Forward to EJ

EMERGENCY PLANNING & COMMUNITY RIGHT TO KNOW ACT (EPCRA) & TOXIC SUBSTANCE CONTROL ACT (TSCA)

1. Did facility file a Tier II report with fire department, Local & State Emergency Planning Committee? Yes ☐ No ☐ Forward to EPCRA
 2. Did facility manufacture, import, or process (formulate, blend, package) >25,000 lbs of a chemical or >100 lbs of a Persistent Bioaccumulative Toxin (lead, mercury, or polycyclic aromatic compounds) at any time over the last 5 years? No ☒ (stop) Yes ☐ Forward to EPCRA
 3. Has the facility: If any box in question 3 is marked - Forward to EPCRA
 a. Stored ≥500 lbs of ammonia ☐ , ≥100 lbs of chlorine ☐ , or ≥10,000 lbs of an industrial chemical ☐ , at any time over the last 2 years? ☐
 b. Stored ≥10,000 lbs of pressurized flammable material (propane, methane, butane, pentane, etc.) at any time over the last 2 years? ☐
 c. Used ≥10,000 lbs of ammonia ☐ , chlorine ☐ , halogenated solvents ☐ , solvent-based paints ☐ , or solvents ☐ , or nitrated compound, over the last calendar year? ☐
 d. Generated ≥ one half pound of metal dusts, fumes, or metal turnings, over the last calendar year? ☐
 4. Does the facility have any oil filled electrical equipment No ☐ (stop) Yes ☒ Forward to TSCA and ask Has facility tested oil filled equipment to determine PCB content; No ☐ Yes ☐ number containing PCBs greater than 50 ppm _____ and percent of all equipment tested _____. Is equipment leaking (including wet or weeping equipment)? No ☒ Yes ☐ - Get Photo
Brand new transformer - owned by utility

CLEAN WATER ACT (CWA) - National Pollution Discharge Elimination System (NPDES), Industrial Pretreatment, Storm Water, & Wetlands

1. Does the facility discharge any wastewater to storm sewers, surface water, or the land? No ☐ (stop) Yes ☒
 If yes, are all wastewater discharges permitted? Yes ☒ No ☐ Forward to CWA
 2. Does the facility have process wastewaters that are discharged to a city POTW (Publicly Owned Treatment Works)? No ☐ (stop) Yes ☒
 If yes, are the discharges permitted by: State? ☐ , City? ☒ - If yes, Stop here. No ☐ Forward to CWA
 If yes, does the city have a state or EPA approved pretreatment program? Yes ☒ No or Don't Know ☐ Forward to CWA
 3. During rainfall events, can storm water carry pollutants from manufacturing, processing, storage, disposal, shipping and receiving areas, or from construction sites >1 acre, to storm sewers or surface water? No ☐ (stop) Yes ☒
 If yes, does the facility have an NPDES permit for these storm water discharges? Yes ☒ No ☐ Forward to CWA
 4. Did you see any wastewater discharges not identified by the facility? No ☒ (stop) Yes ☐ - Identify location, time, appearance of discharge: _____ (Get Photo) Forward to CWA
 5. Does the facility have any wetland areas (e.g. streams, ponds, or temporarily wet areas)? No ☒ (stop) Yes ☐
 If yes, have any wetland areas been dredged, filled, channelized, dammed, or had gravel removed from them within the last 5 years? No ☐ (stop) Yes ☐ - Identify location and timeframe _____ (Get Photo) FWD to Wetlands

SAFE DRINKING WATER ACT (SDWA) - Underground Injection Control (UIC) & Public Water System (PWS)

1. Does facility discharge any liquids to the subsurface (septic systems, disposal wells, cesspools, etc.)? No ☒ (stop) Yes ☐ Forward to UIC
If yes, do these liquid wastes consist of sanitary wastewater only? Yes ☐ No ☐
2. Does facility provide drinking water to 25 people or more from its own source (private well, pond, etc)? No ☒ (stop) Yes ☐ Forward to PWS
If yes, does the facility test or monitor its drinking water in order to comply with state regulations? Yes ☐ No ☐

CLEAN AIR ACT (CAA) and CFCs

1. Do you see any dense, non-steam, smoke or dust emissions leaving the facility property? No ☒ Yes ☐ Forward to CAA
Source _____ (Get Photo)
2. Does the facility have any new air pollution emitting equipment that was constructed or installed in the past 5 years? No ☐ (stop) Yes ☒
If yes, is equipment permitted? Yes ☒ No ☐ Forward to CAA Describe: All boilers & other emission ports including gas flare were installed in 2016 and are permitted.
3. Does the facility have any cooling units that contain >50 lbs of refrigerant? No ☒ (stop) Yes ☐ Forward to CFC
If yes, are these units: Self-serviced? ☐ Contract Serviced? ☐ - Service Company: _____
4. Does the facility have a refrigeration process that contains more than 10,000 lbs of ammonia? No ☒ (stop) Yes ☐ Forward to EPCRA/RMP
5. Does the facility service motor vehicle air conditioning systems? No ☒ (stop) Yes ☐ Forward to CFC

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) and UNDERGROUND STORAGE TANKS (UST)

1. Does the facility generate more than 30-gallons (220 lbs./100kg) of hazardous waste per month or at any one time? No ☐ (stop) Yes ☐
If yes, does facility have an EPA Hazardous Waste Identification Number? Yes ☐ (stop) No ☐ Forward to RCRA
2. Is hazardous waste treated ☐ , stored >90-days ☐ , burned ☐ , land filled ☐ , put in surface impoundments ☐ or waste piles ☐ ?
No ☐ (stop) Yes ☐ If yes, is the facility permitted for above described activity? Yes ☐ No ☐ Forward to RCRA
3. Did you see or does the facility have any large quantities of materials **that the facility claims to be non-hazardous waste material** (>10 drums, roll-offs, waste piles, etc. - exclude clean office trash, cardboard, & packaging type wastes)? No ☐ (stop) Yes ☐

Material Claimed To Be Non-Hazardous

How does the facility know these wastes are non-hazardous?

sludge

Testing, industry or manuf. info., MSDS, etc. ☐ ; None available ☐ Forward to RCRA
Testing, industry or manuf. info., MSDS, etc. ☐ ; None available ☐ Forward to RCRA
Testing, industry or manuf. info., MSDS, etc. ☐ ; None available ☐ Forward to RCRA
Testing, industry or manuf. info., MSDS, etc. ☐ ; None available ☐ Forward to RCRA
Testing, industry or manuf. info., MSDS, etc. ☐ ; None available ☐ Forward to RCRA

4. Did you see any leaking hazardous waste containers, drums, or tanks? No ☒ Yes ☐ Forward to RCRA
Describe: _____ (Get Photo)
5. Did you see any signs of spills or releases (e.g., dead or stressed vegetation, stains, discoloration)? No ☐ Yes ☒ Forward to RCRA
Describe: Frozen pools of dark brown liquid along drive for truck loadout (Get Photo)
6. Did you see any chemical or waste handling practices that concern you (access to children/public)? No ☒ Yes ☐ Forward to RCRA & EPCRA Describe: _____ (Get Photo)
7. Does the facility have any past or present underground petroleum product or hazardous material tanks? No ☒ Yes ☐ Forward to UST
8. Does the facility have any underground fuel tanks for emergency generators? No ☒ Yes ☐ Forward to UST

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC)

1. Does the facility have any aboveground oil tanks (petroleum, synthetic, animal, fish, vegetable), with an aggregate volume >1,320 gallons?
No ☒ (stop) Yes ☐ - Does the facility have a certified SPCC Plan? Yes ☒ No ☐ Forward to SPCC (ADR)
If yes, are there secondary containment systems for the tanks? Yes ☐ No ☐ Forward to SPCC
If yes, are any tanks leaking where oil could reach waters of the State or U.S.? No ☐ Yes ☐ (Get Photo) Forward to SPCC

ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS)

1. Does your facility have an EMS? No ☒ Yes ☐ (Developing one)
2. Is the facility's EMS ISO 14001 certified? No ☒ Yes ☐

* PLEASE TAKE PHOTOS TO DOCUMENT POTENTIAL PROBLEMS

**United States Environmental Protection Agency
Region 7
300 Minnesota Avenue
Kansas City, KS 66101**

Date: JAN 31 2017

Subject: Transmittal of Sample Analysis Results for ASR #: 7355

Project ID: WGP424

Project Description: Big Ox Energy

From: Margaret E.W. St. Germain, Chief *m. st germain*
Laboratory Technology & Analysis Branch, Environmental Sciences & Technology Division

To: Pete Green
ENST/EFCB

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the Online ASR Sample/Data Disposition and Customer Survey for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Online ASR Sample/Data Disposition and Customer Survey.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Enclosures

cc: Analytical Data File.

Project Manager: Pete Green**Org:** ENST/EFCB**Phone:** 913-551-7343**Project ID:** WGP424**Project Desc:** Big Ox Energy**Location:** South Sioux City**State:** Nebraska**Program:** Water Enforcement**Purpose:** Compliance Monitoring**GPRA PRC:** 501E50

Industrial User Sampling Inspection

Explanation of Codes, Units and Qualifiers used on this report**Sample QC Codes:** QC Codes identify the type of sample for quality control purpose.**Units:** Specific units in which results are reported.

___ = Field Sample

mg/L = Milligrams per Liter

FB = Field Blank

SU = Standard Units (pH)

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank)= Values have been reviewed and found acceptable for use.

U = The analyte was not detected at or above the reporting limit.

ASR Number: 7355**Sample Information Summary****01/31/2017****Project ID:** WGP424**Project Desc:** Big Ox Energy

Sample No	QC Code	Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 - ___		Water			01/10/2017	13:25			01/12/2017
2 - ___		Water			01/10/2017	00:00	01/11/2017	00:00	01/12/2017
3 - ___		Water			01/11/2017	00:00	01/12/2017	00:00	01/12/2017
4 - FB		Water	Field Blank sample: Ammonia, COD, N-N as N & TKN		01/10/2017	17:00			01/12/2017

Analysis	Comments About Results For This Analysis
----------	--

1 Ammonia in Water

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3133.11B**Samples:** 1-__ 2-__ 3-__ 4-FB**Comments:**

1 BOD5 in Water by DO Probe

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3153.1G**Samples:** 1-__ 2-__ 3-__**Comments:**

(N/A)

1 Chemical Oxygen Demand

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3153.2G**Samples:** 1-__ 2-__ 3-__ 4-FB**Comments:**

1 NFS or Nonfilterable Solids

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3142.3H**Samples:** 1-__ 2-__ 3-__**Comments:**

(N/A)

1 Nitrogen, Nitrate+Nitrite in Water

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** RLAB Method for acidified samples (for total NO3+NO2 analysis)**Samples:** 1-__ 2-__ 3-__ 4-FB**Comments:**

1 pH of Water by Field Measurement

Lab: (Field Measurement)**Method:** Measurement of field parameter

ASR Number: 7355

RLAB Approved Analysis Comments

01/31/2017

Project ID: WGP424

Project Desc Big Ox Energy

Analysis	Comments About Results For This Analysis
----------	--

Samples: 1-__ 3-__

Comments:

(N/A)

1 Total Kjeldahl Nitrogen in Water Colorimetric

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3133.3H

Samples: 1-__ 2-__ 3-__ 4-FB

Comments:

ASR Number: 7355**RLAB Approved Sample Analysis Results****01/31/2017****Project ID:** WGP424**Project Desc:** Big Ox Energy

Analysis/ Analyte	Units	1-__	2-__	3-__	4-FB
1 Ammonia in Water Ammonia as Nitrogen	mg/L	278	300	212	0.100 U
1 BOD5 in Water by DO Probe BOD5	mg/L	1970	2380	2380	
1 Chemical Oxygen Demand COD	mg/L	3590	4420	4320	12.0 U
1 NFS or Nonfilterable Solids Solids, nonfilterable	mg/L	697	813	564	
1 Nitrogen, Nitrate+Nitrite in Water Nitrate + Nitrite as Nitrogen	mg/L	0.229	0.0631	0.132	0.0400 U
1 pH of Water by Field Measurement pH	SU	6.83		6.93	
1 Total Kjeldahl Nitrogen in Water Colorimetric Total Kjeldahl Nitrogen	mg/L	410	456	337	0.200 U



Significant Industrial User Temporary Wastewater Discharge Permit
SIOUX CITY, IA
UTILITIES DEPARTMENT

Permit Number 2016-31-I

In accordance with the provisions of City Codified Ordinance Chapter 13.10.03 Permittee:

Big Ox Energy Siouxland

Firm

1616 D Avenue

Location Address

South Sioux City, NE 68776

City, State, Zip Code

This Temporary Discharge Permit is hereby authorized to discharge process wastewater from the above identified facility to the City of Sioux City sanitary sewer system in accordance with the conditions set forth in this permit and said ordinance(s). Once the attached compliance schedule has been closed a final Discharge Permit shall be issued. Compliance with this permit does not relieve the permittee of its obligation to comply with all applicable regulations, standards, or requirements under Local, State and Federal laws, including such laws that may become effective during the term of this permit or become effective due to modifications in the operation or wastes treated at the facility.

Noncompliance with any term or condition of this permit or with any portion of the City of Sioux City Sewer Use Ordinance, or those regulations contained in 40 CFR 403, shall constitute a violation of the approved pretreatment program, and therefore, be subject to the penalties ascribed in the City's Enforcement Response Plan and Chapter 13.08.09 in the Municipal Code. The conditions contained herein are considered part of the permittee's requirements and any violation of the conditions herein will be evaluated and the appropriate enforcement action will be applicable. Situations of continued non-compliance shall result in escalation of enforcement action(s).

General Information:

Date of Issue: May 1, 2016

Compliance Schedule Expiration Date: May 1, 2016

Final Permit Expiration Date: April 13, 2020

Renewal Application Date: January 13, 2020

Standard Industrial Classification Code: 2869-Resource Recovery and Manufacturer of Industrial Organic Chemicals

Applicable Categorical Standard: Currently under review by EPA Region 7 Pretreatment

Effluent Discharge Limitations:

Parameter	Daily Maximum	Monthly Average	Sampling Location	Sampling Frequency
pH	5.0-11.5 s.u	5.0-11.5 s.u.	Effluent Composite Sampler	Once per Month

General Permit Conditions:

1. The discharge of process waters into the sanitary sewer system for the purpose of treatment at the City's WWTP shall be allowed by permit only for waters whose chemical and physical characteristics are compatible for treatment. Application for such permit shall be made in the form of "Wastewater Discharge Permit Application", prescribed to the City of Sioux City Pretreatment Office.
 - a. Such permits shall be issued for a limited period at the sole discretion of the Pretreatment Manager and upon such terms and conditions deemed to be in the best interest of the City.
 - b. Permit renewal applications must be filed 90 days prior to the expiration of said permit or prior to the requested discharge.
2. The Pretreatment Manager may at any time modify said permit for reasons including but not limited to:
 - a. Incorporation of new or revised Federal, State or local water quality/pretreatment standards or requirements,
 - b. Changes to the operation that affect the integrity of the water quality discharging at the time of permit issuance, or
 - c. Upon request of the permittee to accommodate:
 - i. Permit transfer to new owner/operator,
 - ii. Permit modification, or
 - iii. Permit termination
3. The permittee may petition to appeal the terms of this permit within thirty (30) days of the notice:
 - a. Failure to submit a petition for review shall waive the right to appeal.
 - b. The permittee must indicate the reasons for the objection, and the alternative condition, if any, it seeks to be placed in the objection.

If reconsideration is appropriate said permit shall be reissued by the Pretreatment Manager. If reconsideration is denied the decision shall be considered final administrative action for purpose of judicial review.

4. If pretreatment of a proposed discharge by the permit holder is necessary to meet permit requirements of the City for discharge into the sanitary sewer system, the permit holder shall be responsible to design and construct such pretreatment facilities prior to any such discharge being initiated.
 - a. Said pretreatment facilities shall comply with all City, State and Federal regulatory requirements.
 - b. The discharge must continuously meet or exceed the quality required by permit conditions, City sewer use ordinances, state and federal categorical standards.
 - c. Should the permittee fail to meet such requirements, the Pretreatment Manager may issue a compliance schedule for the correction of the violation and/or request that the discharge cease and be retained by the permit holder until pre-treatment by the permit holder results in meeting such requirements.
5. If the facility is found in non-compliance of any issued permit limit, or is identified as a facility of concern, the permit holder may be issued a compliance schedule for the implementation and operation of the best available control technology for the pollutant(s) of concern.
 - a. Said pretreatment facilities shall comply with all City, State and Federal regulatory requirements.
 - b. The discharge must continuously meet or exceed the quality required by permit conditions, City sewer use ordinances, state and federal categorical standards.
 - c. Should the permittee fail to meet such requirements, the Pretreatment Manager may issue additional enforcement actions for the correction of the violation(s) and/or may request that the discharge cease and be retained by the permit holder until pre-treatment by the permit holder results in meeting such requirements/discharge limits.
6. The permittee shall operate and maintain all facilities and systems of treatment and control, and related equipment which are installed or used to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, but is not limited to effective performance, implementation of appropriate best management practices, adequate funding, adequate operator staffing and training, and adequate process controls, including appropriate back-up or auxiliary facilities or similar systems, when necessary to achieve compliance with the conditions of the permit. During loss or failure of all or part of the pretreatment facility, the permittee shall:
 - a. Notify the Pretreatment Office immediate to the extent of the process inhibition and the corrective actions taking place to rectify the situation,
 - b. Institute control where necessary to maintain compliance with its permit,
 - c. Control its production or discharges or both until operation of the pretreatment facility is restored, or
 - d. Find an alternative method of treatment is provided.
7. The route, from discharge point to sewage treatment plant, will be analyzed by the City for available capacity. This analysis may be used to establish: 1) allowable rates of discharge, 2) time(s) of day for such discharge, and, 3) wet weather flow curtailments for the permit holder's discharge. Periodic sewer system capacity checks will be made by the City and volumes/rates and time of day schedules for the permit holder may be adjusted by the City thereafter. The permit holder must comply with the latest volume/rate, time of day schedule provided by the City. Further, the City, at the discretion of the Pretreatment Manager, may order the alteration or temporary suspension of ground/surface water discharges if wet weather or other conditions cause the sanitary sewer system to become overtaxed or surcharged. The permit holder must comply with such orders. In consideration of the foregoing, it is the permit holder's responsibility to provide flow retention facilities with adequate capacity for containing the permit holder's discharge(s) during periods of time when the City curtails the discharge(s) to the sanitary sewer system.

8. The permittee shall notify the Pretreatment Office prior to any changes within the operation of the facility that impact the volume, concentration or nature of the discharge. This includes but is not limited to facility shut down for maintenance/repair, seasonal variations due to product demand, modifications to the current pretreatment system, and/or any non-routine discharge that may be considered a Slug Discharge.
9. In the event that a spill or slug discharge occurs and the pollutant of concern has entered the sanitary sewer immediate notification to the Pretreatment Department 712-898-6793 and to the WWTP Operator 712-202-3160 is required. The notification will need to include the pollutant released, the volume and any known hazards. A written explanation of the event will need to be submitted to the Pretreatment Department within 24 hours summarizing the incident, the cause, how it was remediated and the steps taken to prevent such occurrence from happening again.
10. The permittee is responsible for the evaluation and implementation of BMPs related to Slug Discharge Control, separately or in combination with a Slug Control Plan. These BMPs are intended to prevent pollutants from entering the discharge waste stream or from reaching a discharge point. They include but are not limited to:
 - a. Preventative Maintenance to identify and correct equipment leaks or malfunctions
 - b. Operating Procedures to prevent and control runoff, spills and waste disposal
 - c. Process Monitoring including loss/yield calculations
 - d. Spill Response Plan
 - e. Employee training
 - f. Spill Control and housekeeping procedures for chemical storage areas and secondary containment
11. In the event that the City is unable to perform the required permit compliance monitoring and reporting as listed in the permit and/or as required by 40 CFR 403, it shall be the permittee's responsibility to complete this according to the approved program frequency.
12. Sampling and analysis shall be completed in accordance with 40 CFR 136 at a sampling location mutually agreed upon by the City and the permittee. If multiple effluent outfalls exist than samples will need to be evaluated simultaneously at all appropriate discharge locations during a sampling event. Repeat sampling for a non-compliant sampling event must be completed within 30 days of becoming aware of a discharge violation.
 - a. Samples frequency for permitted industrial users discharging more than 25,000 gpd
 - i. A composite sample once per week for TSS and BOD
 - ii. A grab sample once per week for FOG
 - iii. A grab sample once per month for pH
 - iv. A composite sample once per week for TN and TP
 - b. Sample frequency for permitted industrial users discharging less than 25,000 gpd
 - i. A composite sample once per month for TSS and BOD
 - ii. A grab sample once per month for FOG
 - iii. A grab sample once per month for pH
 - iv. A composite sample once per month for TN and TP
 - c. All samples shall be collected through the use of a discrete composite sampler. The sampler and flow meter are the property of the permittee and are required to be working condition at all times.

- d. The sampling location for Big Ox Energy Siouxland has yet to be determined.
- e. The sampling frequency for Big Ox Energy Siouxland shall be:

Parameter	Daily Maximum	Monthly Average	Sampling Location	Sampling Frequency
TSS	N/A	N/A	Effluent Composite Sampler	Once per week
BOD	N/A	N/A	Effluent Composite Sampler	Once per week
FOG	N/A	N/A	Effluent Composite Sampler	Once per week
Total Nitrogen	N/A	N/A	Effluent Composite Sampler	Once per week
Total Phosphorous	N/A	N/A	Effluent Composite Sampler	Once per week

Prohibition and Enforcement:

1. Sampling and reporting shall be conducted as specified in 40 CFR 403 and in accordance with the City's approved pretreatment program.
 - a. Permitted industries discharging more than 25,000 GPD shall be sampled once per week, unless otherwise requested by the industry or required based on historical discharge data.
 - b. Permitted industries discharging less than 25,000 GPD shall be sampled once per month, unless otherwise requested by the industry or required based on historical discharge data.
 - c. All samples shall be collected using 24-hour composite sampling methodology.
 - d. For the purposes of this permit the City has agreed to undertake the sampling and reporting, in the event that the City is not capable or able to complete this requirement it is the responsibility of the permittee to complete this in accordance with 40 CFR 136 for the permitted and billable parameters.
2. Big Ox Energy Siouxland, shall be required to install, operate and maintain an effluent flow meter to determine the total amount and rate of flow for the facility discharge and a discrete effluent sampler for the collection of discharge samples based on flow pacing. The permit holder shall purchase and install, at its own expense, a flow measuring device which shall record total daily and monthly flow, maximum hourly flow, and time of day of all such flows. Said flow measuring device(s) shall be acceptable to the City and accessible for inspection by the City. Additionally, the devices shall be maintained in accordance with manufacturer's recommendations and calibrations of said devices shall be performed on a schedule provided by the City, all at the permit holder's expense. The City, at the discretion of the Pretreatment Manager, reserves the right to require separate and/or additional and/or redundant discharge metering devices for certain discharges if deemed necessary.
3. The permittee is prohibited from increasing the use of potable or process water or in any way attempting to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the effluent discharge limitations set forth in this permit.
4. Bypass of any pretreatment process is prohibited unless it is unavoidable to prevent loss of life, personal injury, severe property damage, or no feasible alternative exists. In the event of a bypass the permittee is shall notify the Pretreatment Office as soon as possible:
 - a. Advance notice, in writing, shall be submitted to the Pretreatment Office at least ten (10) days prior to the proposed bypass for review and approval/denial,
 - b. An unanticipated or accidental bypass shall be reported immediately to the WWTP operations staff at 712-203-3160 and formal notification made to the Pretreatment Office via phone 712-898-6793 and email or fax including the following:
 - i. Description of the bypass, its cause, duration, and pollutants of concern,

- ii. Whether or not the bypass has ceased, and
- iii. The steps taken to reduce, eliminate and/or prevent the reoccurrence of the bypass.

5. In the event that the permit holder is found to be in non-compliance with any ordinance(s) or regulations pertaining to the nature of this permit, the Pretreatment Manager will provide notice to the permit holder immediately upon becoming aware of the violation. The permit holder is expected to fix the issue of noncompliance immediately and will have ten (10) days thereafter to respond in writing to the Pretreatment Office. The response shall include the identified nature or cause of the violation, and the steps taken to mitigate further violations of the same nature from occurring. Failure to do so will result in escalation of enforcement and may invalidate the permit and subject the permit holder to civil and/or criminal prosecution. The ten (10) day period provided for correction of deficiencies does not relieve and/or release the permit holder from any liabilities arising from said non-compliance and additional violation(s) of the same nature can be issued during that timeframe causing an additional escalation of enforcement.
6. Failure to comply with the requirements of this permit may be ground for administrative action or enforcement proceedings including but not limited to those contained in the City's Enforcement Response Plan and Municipal Code Chapter 13.08.09. Failure to comply may also result in the termination of the permit for the following reasons including but not limited to:
- a. Falsifying self-monitoring reports,
 - b. Tampering with monitoring equipment,
 - c. Refusing to allow timely access to the facility premises and/or records,
 - d. Continuous violations of effluent limitations,
 - e. Illicit discharge of waste that causes interference or pass through,
 - f. Failure to pay fines,
 - g. Failure to pay sewer charges, and
 - h. Failure to meet compliance schedules.
7. As a condition precedent, the permit holder will agree to hold harmless the City and the City's employees from any liabilities arising from the permit holder's operations under this permit.

Prior to discharge under this Temporary Discharge Permit a final facility walk through must be completed by the Pretreatment Manager. During the optimization sample may be collected daily for documentation and tracking. Once the facility is operational a 90 Day Baseline Monitoring shall be completed to track and trend the discharge concentrations.

The Permit has been issued based on the information provided on your Permit Application and/or surveillance by Utilities representatives. Following the closure of the attached compliance schedule, which includes the baseline monitoring, a determination shall be made on the characteristics of the wastewater and at such time all applicable permit limits shall be issued. A new discharge permit may, with additional limits may be required if the characteristics of the water indicated on this permit change.

A renewal permit application must be submitted no later than 90 days prior to the above expiration date, if permittee wishes to continue discharging after said date.

By: Desiree MS De

Issued this

1st
Day

of

May
Month

2016
Year



Section A: General Information for Sewer Discharge Permit

1. Business Name (*as it will appear on permit*): Big Ox Energy Siouxland
2. Operator/Owner: Big Ox Energy, Inc.
3. Billing Address: 6601 County Road R
Denmark, WI 54208
4. Billing Contact and Phone Number: Bryan Lemmens
920-676-2765
5. Facility Address (*if different from billing*): 1616 D Avenue
Dakota City, NE 68731
6. Facility Phone Number: TBD
7. Representative to Contact Concerning Information Provided:
Name: Matt Cole
Title: VP of Engineering
Phone Number: 920-615-2226
E-mail: mcole@bigoxenergy.com
8. Authorized Representative:
Name: Matt Cole
Title: VP of Engineering
Phone Number: 920-615-2226
E-mail: mcole@bigoxenergy.com
9. Name of Representative to receive permit (*if different from Authorized Representative*):
Name: _____
Title: _____
Phone Number: _____
E-mail: _____

10. Does the facility currently have environmental permits from other agencies? ☒ Y / N
If yes, please attach copies of all current permits.

-Will be attached when facility is in operation

11. Facility Tax ID Code (Billing information): 37-1760263

Section B: Operational Information

PLEASE ANSWER ALL QUESTIONS COMPLETELY

1. Existing Wastewater Discharge Permit Number (if applicable): N/A
2. Type of Notification:
- Existing Discharger
 - Discharge Modification
 - **Proposed Discharge as of** 4/1/2016 (date)

Please indicate what discharge operations will be in place at the time of discharge.

- **Discharge to sewer**
- Discharge to holding or equalization tank
- Discharge to a septic tank

Will contents be hauled to the POTW?

Y / N

3. Does the facility discharge more than 25,000 gallons of process wastewater per day? ☒ Y / N

4. Type of operation currently present at your facility (check all that apply):
- | | |
|---|---------------------------------|
| • Electroplating | • Medical Care Facility |
| • Foundry | • Military |
| • Painting or Finishing | • Office or Retail Facility |
| • Metal Finishing | • Pet Food Manufacturer |
| • Machine Shop/Assembly | • Pharmaceutical Manufacturer |
| • Chemical Manufacturer | • Photographic Developing |
| • Electronics Manufacturer | • Powder Coating Paint Facility |
| • Equipment Cleaning/
Washing Facility | • Residential |
| • Fertilizer Manufacturer | • Printing |
| • Food or Beverage
Manufacturer | • Rendering Facility |
| • Food or Beverage Packing
Facility | • Slaughter Facility |
| • Laboratory | |
| • Leachate | |

• **Other** Chemical Manufacturer

For Pretreatment Standards, please reference the Code of Federal Regulations:
40 CFR Parts 400 to 699.

Please provide a brief description of the operation(s) checked above:

The Big Ox Energy Siouxland facility processes wastewater and organic wastes from surrounding industries. Wastewater is delivered to the facilities through three forcemains and treated through a Dissolved Air Flotation (DAF) process and discharge through a forcemain to the municipal sanitary sewer. Solids removed from the DAF process and high strength hauled-in wastes are processed through an anaerobic digestion system. The biogas produced from the digestion process is scrubbed, compressed and injected into the natural gas pipeline. Resultant solids are dewatered and hauled-out as dewatered cake.

5. List Standard Industrial Codes (SIC) in order of importance:
- a. **2869 – Resource Recovery and Manufacturer of Industrial Organic Chemicals**
6. Will waste be disposed of by any of the following methods:
- Land Application
 - Land Fill Disposal
 - Outside Company
 - Other
- If other, please explain:*

Section C: Plant Information

1. Production Information:
- Number of employees: Approximately 25
- Number of shifts: 3-Shifts
- Hours of operation:
- | | | |
|-----------------|-----------------------|----------------------|
| 1 st | Start <u>6:00 AM</u> | Stop <u>2:00 PM</u> |
| 2 nd | Start <u>2:00 PM</u> | Stop <u>10:00 PM</u> |
| 3 rd | Start <u>10:00 PM</u> | Stop <u>6:00 AM</u> |
- Production days per week: 7
- Number of wash downs/sanitation per shift: N/A
2. Does the process/operation have seasonal variations? Y / ☒ N
- If yes, please explain:*
-
-
-

- | Type of Discharge | Gallons per day |
|--------------------------------------|-----------------------|
| ▪ Sanitary Wastewater* | <u>10,000 +/-</u> |
| ▪ Process Wastewater | <u>Ave: 1.44 MGD</u> |
| | <u>Max: 3.024 MGD</u> |
| ▪ Contaminated Cooling Water | _____ |
| ▪ Uncontaminated Cooling Water | _____ |
| ▪ Boiler/Kiln Wastewater | _____ |
| ▪ Blow down/Cooling Tower Wastewater | _____ |

- Air Pollution Control Wastewater _____
- Other _____

If other, please explain:

*Sanitary wastewater consists of domestic contributions; 25 gallons per person per day is an estimated base discharge.

10. If non-contact cooling water is discharged how much is reclaimed for reuse?

If not reclaimed, please explain:

11. How is wastewater effluent flow measured?

- Weir
- Flume
- **Magmeter**
- Other

12. If batch discharged marked in question 9 above please mark the frequency of the batch process and the amounts of a normal batch operation:

Frequency	Gallons per Batch
▪ Daily	_____
▪ Weekly	_____
▪ Monthly	_____
▪ Yearly	_____

13. Do all floor drains discharge to the sanitary sewer?

Y / ☒ N

Section D: Pretreatment

1. Are pretreatment processes implemented, scheduled, or being upgraded in your process?

☒ Y / N

2. Please check pretreatment processes that apply:

- Aerobic lagoon
- Anaerobic digester/lagoon
- Biological treatment
- Centrifuge/Decanter
- Clarifier

- Chemical precipitation
- DAF system
- Equalization tank
- Facultative lagoon
- Gas/Oil separation
- Grease pit
- Ion exchange
- pH adjustment/Neutralization
- Screen/Grit removal
- Sedimentation
- Silver Recovery

If facility has grit removal, a grease pit, oil/water separation, or a DAF please describe where waste materials from such separations will be disposed of and by whom they will be transported:

Type of waste	Disposal site	Hauler
<u>DAF</u>	<u>Waste treated onsite</u>	<u>N/A</u>
_____	_____	_____
_____	_____	_____

3. Have all pretreatment process technicians been appropriately trained? Y / ☐ N
The process technicians will be trained before the facility is in operation.
4. Will there be multiple effluent discharge outfalls? Y / ☐ N
5. Will all discharges have a collective discharge point before entering sanitary? ☒ Y / N

If yes, please explain where and what type:

The effluent wastewater from the facility is collected in a wet well. Wastewater from the wet well is pumped to the City of South Sioux City forcemain. The facility has complete control of when wastewater is discharged to the sanitary sewer.

6. Are any process changes planned that will affect the volume or loadings of the wastewater? *Mark all that apply:*
- Pretreatment modifications
 - Process overhauls
 - Reduction/addition of sewer connections

N/A – New Facility

If any of the above apply, please explain the changes and the impacts on wastewater flow from facility:

Projected Process Change

Projected Completion Date

All process changes shall be submitted in writing to the Environmental Services Department with a detailed description, prints/schematics, and a projected completion date for review and approval from the City before such changes commence.

7. Will other wastes, liquid or sludge, from the following list be hauled from the facility? **NONE**

Type of Waste

Amount per year (Gallons)

- Paint/Paint Thinner
- Inks/Dyes
- Acids
- Alkalies
- Plating Waste
- Pesticides
- Rendering

If any of the above are hauled from facility, please list by whom and where waste will be transported for disposal: **N/A**

Type of Waste

Disposal Site

Hauler

Section E: Chemical Information

1. Provide a list of chemicals or raw materials used in processes that may affect the integrity of the wastewater being contributed to the sanitary collection system. Please attach an MSDS for all products used in processes in excess of 5 gallons.

Chemical/Material

Quantity used per year

Ferric Chloride

TBD

Caustic

TBD

Nitric Acid

TBD

Polymer

TBD

2. Does the facility keep all MSDS up to date for all chemicals at the facility? Y / ☒ N
Not in operation yet
3. Is a Spill Prevention, Control and Countermeasure Plan (SPCC) in place; is it up to date? Y / ☒ N
Not Required for Facility
4. Is an Accidental Discharge Plan in place; is it up to date? Y / ☒ N
Accidental Slug and Spill Control Plan Submitted as a Work in Progress
5. Is a Slug Control Plan in place; is it up to date? Y / ☒ N
Accidental Slug and Spill Control Plan Submitted as a Work in Progress
6. Is a Chemical Disposal Plan in place; is it up to date? Y / ☒ N
Contingency Plan Submitted as a Work in Progress
7. If "no" to any of the above questions does the facility intend to implement such plans? ☒ Y / N
The facility will do the following when it is in operation:
 - Keep all MSDS up to date
 - Have a Contingency Plan in place when it is in operation.
 - Have an Accidental Slug and Spill Control Plan in place when it is in operation.
 - Have an Industrial Storm Water Pollution Prevention Plan in place when it is in operation.
8. Are chemicals stored in secondary containment? Y / N
As required by code
9. Can spilled materials, chemicals, or process wastes flow to floor drains and be discharged into the sanitary sewer? Y / ☒ N
10. In the past, has the facility had spills, discharges or slug load discharges? Y / ☒ N
If yes, please explain:
- | Date | Type of spill/discharge | Amount | Reason |
|-------|-------------------------|--------|--------|
| _____ | _____ | _____ | _____ |
11. Does the facility have air-scrubbing equipment? Y / ☒ N
12. Does the facility use odor mitigating chemicals? Y / ☒ N

Section F: Discharge Data

If available or if possible please list the engineers estimated discharge concentration after any implemented or planned pretreatment processes for the following:

Pollutant	Projected Discharge Concentration
TSS	TBD
FOG	TBD
BOD	TBD
NH3	TBD
TKN	TBD
TN	TBD
TP	TBD
Chlorides	TBD
pH	TBD

Section G: Submission

Upon submission of this form please attach the following items from checklist:

- Schematic of operations/Facility plan
 - *Attached Schematic of Operations*
- Detailed layout of wastewater flow and all discharge locations to the sanitary sewer
 - *Attached mechanical drawings and Storm Water Pollution Prevention Plan includes site plan with forcemain to sanitary sewer detail*
- Sketch of all pretreatment facilities (if applicable)
 - *Attached mechanical drawings*
- Copy of Spill Prevention, Control and Countermeasure Plan SOP
 - *Not required for facility*
- Copy of Accidental Discharge SOP
 - *Submitted as a work in progress Accidental Slug and Spill Control Plan*
- Copy of Slug Control SOP
 - *Submitted as a work in progress Accidental Slug and Spill Control Plan*
- Copy of Chemical Disposal SOP
 - *Submitted as a work in progress Contingency Plan*
- Copy of Stormwater Pollution Prevention Plan
 - *Submitted as a work in progress Storm Water Pollution Prevention Plan*
- Latest wastewater analysis results (if available)
 - *Not Available*
- Other Environmental Permits

Section H: Certification Statement

As the signing authority I am aware that there are penalties for providing any false or misleading information, including fines and/or imprisonment. To the best of my knowledge I believe the information provided here to be true, accurate and complete. By signing below I take responsibility for the information provided.

Name: Mer R Cu Title: VP of Engineering Date: 6/5/15



January 31, 2017

Jason Osbarh
Big Ox Energy
1616 D Avenue
South Sioux City, NE 68776

Re: Categorical Permit Requirements Waived

On May 1, 2016 a Temporary Discharge Permit was issued to Big Ox Energy for the discharge of wastewater from their facility located in South Sioux City, NE to the Sioux City Wastewater Treatment Plant for treatment and disposal. At that time of the permit issuance, the discharge was classified as Categorical under 40 CFR 437 subpart D. Since that time additional review by EPA Region 7 has determined that the facility is not subject to the Categorical requirements contained in the code as and; which state that "This subpart does not apply to the following discharges of wastewater from a Combined Waste Treatment facility":

- 437.1(b)(8) Wastewater from the treatment of, or recovery of material from, animal or vegetable fats/oil from grease traps or interceptors generated by facilities engaged in food service activities,
- 437.1(b)(9) Wastewater from the treatment of, or recovery of material from, off-site wastes generated by facilities engaged in only food processing.

Effective immediately the attached permit has been amended to remove the Categorical discharge classification and the previously agreed upon compliance schedule is terminated. It should be noted that future modifications to the facility may require the facility to meet Categorical discharge limits if applicable.

If you have questions or comments, please call me at 712-279-6987.

Respectfully,

A handwritten signature in black ink that reads "Desiree McCaslen".

Desiree McCaslen, City of Sioux City
Pretreatment Manager

Attachment: Amended Temporary Discharge Permit#2016-31-1

cc: IDNR Field Office 3
File



Significant Industrial User Temporary Wastewater Discharge Permit
SIOUX CITY, IA
UTILITIES DEPARTMENT

Permit Number 2016-31-I

In accordance with the provisions of City Codified Ordinance Chapter 13.10.03 Permittee:

Big Ox Energy Siouxland

Firm

1616 D Avenue

Location Address

South Sioux City, NE 68776

City, State, Zip Code

This Temporary Discharge Permit is hereby authorized to discharge process wastewater from the above identified facility to the City of Sioux City sanitary sewer system in accordance with the conditions set forth in this permit and said ordinance(s). Once the attached compliance schedule has been closed a final Discharge Permit shall be issued. Compliance with this permit does not relieve the permittee of its obligation to comply with all applicable regulations, standards, or requirements under Local, State and Federal laws, including such laws that may become effective during the term of this permit or become effective due to modifications in the operation or wastes treated at the facility.

Noncompliance with any term or condition of this permit or with any portion of the City of Sioux City Sewer Use Ordinance, or those regulations contained in 40 CFR 403, shall constitute a violation of the approved pretreatment program, and therefore, be subject to the penalties ascribed in the City's Enforcement Response Plan and Chapter 13.08.09 in the Municipal Code. The conditions contained herein are considered part of the permittee's requirements and any violation of the conditions herein will be evaluated and the appropriate enforcement action will be applicable. Situations of continued non-compliance shall result in escalation of enforcement action(s).

General Information:

Date of Issue: May 1, 2016

Compliance Schedule Expiration Date: May 1, 2016

Final Permit Expiration Date: April 13, 2020

Renewal Application Date: January 13, 2020

Permit Amendment Date: January 31, 2017

Standard Industrial Classification Code: 2869-Resource Recovery and Manufacturer of Industrial Organic Chemicals

Applicable Categorical Standard: Following review by EPA Region 7 no Categorical Requirement

Effluent Discharge Limitations:

Parameter	Daily Maximum	Monthly Average	Sampling Location	Sampling Frequency
pH	5.0-11.5 s.u	5.0-11.5 s.u.	Effluent Composite Sampler	Once per Month

General Permit Conditions:

1. The discharge of process waters into the sanitary sewer system for the purpose of treatment at the City's WWTP shall be allowed by permit only for waters whose chemical and physical characteristics are compatible for treatment. Application for such permit shall be made in the form of "Wastewater Discharge Permit Application", prescribed to the City of Sioux City Pretreatment Office.
 - a. Such permits shall be issued for a limited period at the sole discretion of the Pretreatment Manager and upon such terms and conditions deemed to be in the best interest of the City.
 - b. Permit renewal applications must be filed 90 days prior to the expiration of said permit or prior to the requested discharge.
2. The Pretreatment Manager may at any time modify said permit for reasons including but not limited to:
 - a. Incorporation of new or revised Federal, State or local water quality/pretreatment standards or requirements,
 - b. Changes to the operation that affect the integrity of the water quality discharging at the time of permit issuance, or
 - c. Upon request of the permittee to accommodate:
 - i. Permit transfer to new owner/operator,
 - ii. Permit modification, or
 - iii. Permit termination
3. The permittee may petition to appeal the terms of this permit within thirty (30) days of the notice:
 - a. Failure to submit a petition for review shall waive the right to appeal.
 - b. The permittee must indicate the reasons for the objection, and the alternative condition, if any, it seeks to be placed in the objection.

If reconsideration is appropriate said permit shall be reissued by the Pretreatment Manager. If reconsideration is denied the decision shall be considered final administrative action for purpose of judicial review.

4. If pretreatment of a proposed discharge by the permit holder is necessary to meet permit requirements of the City for discharge into the sanitary sewer system, the permit holder shall be responsible to design and construct such pretreatment facilities prior to any such discharge being initiated.
 - a. Said pretreatment facilities shall comply with all City, State and Federal regulatory requirements.
 - b. The discharge must continuously meet or exceed the quality required by permit conditions, City sewer use ordinances, state and federal categorical standards.
 - c. Should the permittee fail to meet such requirements, the Pretreatment Manager may issue a compliance schedule for the correction of the violation and/or request that the discharge cease and be retained by the permit holder until pre-treatment by the permit holder results in meeting such requirements.
5. If the facility is found in non-compliance of any issued permit limit, or is identified as a facility of concern, the permit holder may be issued a compliance schedule for the implementation and operation of the best available control technology for the pollutant(s) of concern.
 - a. Said pretreatment facilities shall comply with all City, State and Federal regulatory requirements.
 - b. The discharge must continuously meet or exceed the quality required by permit conditions, City sewer use ordinances, state and federal categorical standards.
 - c. Should the permittee fail to meet such requirements, the Pretreatment Manager may issue additional enforcement actions for the correction of the violation(s) and/or may request that the discharge cease and be retained by the permit holder until pre-treatment by the permit holder results in meeting such requirements/discharge limits.
6. The permittee shall operate and maintain all facilities and systems of treatment and control, and related equipment which are installed or used to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, but is not limited to effective performance, implementation of appropriate best management practices, adequate funding, adequate operator staffing and training, and adequate process controls, including appropriate back-up or auxiliary facilities or similar systems, when necessary to achieve compliance with the conditions of the permit. During loss or failure of all or part of the pretreatment facility, the permittee shall:
 - a. Notify the Pretreatment Office immediate to the extent of the process inhibition and the corrective actions taking place to rectify the situation,
 - b. Institute control where necessary to maintain compliance with its permit,
 - c. Control its production or discharges or both until operation of the pretreatment facility is restored, or
 - d. Find an alternative method of treatment is provided.
7. The route, from discharge point to sewage treatment plant, will be analyzed by the City for available capacity. This analysis may be used to establish: 1) allowable rates of discharge, 2) time(s) of day for such discharge, and, 3) wet weather flow curtailments for the permit holder's discharge. Periodic sewer system capacity checks will be made by the City and volumes/rates and time of day schedules for the permit holder may be adjusted by the City thereafter. The permit holder must comply with the latest volume/rate, time of day schedule provided by the City. Further, the City, at the discretion of the Pretreatment Manager, may order the alteration or temporary suspension of ground/surface water discharges if wet weather or other conditions cause the sanitary sewer system to become overtaxed or surcharged. The permit holder must comply with such orders. In consideration of the foregoing, it is the permit holder's responsibility to provide flow retention facilities with adequate capacity for containing the permit holder's discharge(s) during periods of time when the City curtails the discharge(s) to the sanitary sewer system.
8. The permittee shall notify the Pretreatment Office prior to any changes within the operation of the facility that impact the volume, concentration or nature of the discharge. This includes but is not limited to facility shut down for maintenance/repair, seasonal variations due to product demand, modifications to the current pretreatment system, and/or any non-routine discharge that may be considered a Slug Discharge.

9. In the event that a spill or slug discharge occurs and the pollutant of concern has entered the sanitary sewer immediate notification to the Pretreatment Department 712-898-6793 and to the WWTP Operator 712-202-3160 is required. The notification will need to include the pollutant released, the volume and any known hazards. A written explanation of the event will need to be submitted to the Pretreatment Department within 24 hours summarizing the incident, the cause, how it was remediated and the steps taken to prevent such occurrence from happening again.
10. The permittee is responsible for the evaluation and implementation of BMPs related to Slug Discharge Control, separately or in combination with a Slug Control Plan. These BMPs are intended to prevent pollutants from entering the discharge waste stream or from reaching a discharge point. They include but are not limited to:
 - a. Preventative Maintenance to identify and correct equipment leaks or malfunctions
 - b. Operating Procedures to prevent and control runoff, spills and waste disposal
 - c. Process Monitoring including loss/yield calculations
 - d. Spill Response Plan
 - e. Employee training
 - f. Spill Control and housekeeping procedures for chemical storage areas and secondary containment
11. In the event that the City is unable to perform the required permit compliance monitoring and reporting as listed in the permit and/or as required by 40 CFR 403, it shall be the permittee's responsibility to complete this according to the approved program frequency.
12. Sampling and analysis shall be completed in accordance with 40 CFR 136 at a sampling location mutually agreed upon by the City and the permittee. If multiple effluent outfalls exist than samples will need to be evaluated simultaneously at all appropriate discharge locations during a sampling event. Repeat sampling for a non-compliant sampling event must be completed within 30 days of becoming aware of a discharge violation.
 - a. Samples frequency for permitted industrial users discharging more than 25,000 gpd
 - i. A composite sample once per week for TSS and BOD
 - ii. A grab sample once per week for FOG
 - iii. A grab sample once per month for pH
 - iv. A composite sample once per week for TN and TP
 - b. Sample frequency for permitted industrial users discharging less than 25,000 gpd
 - i. A composite sample once per month for TSS and BOD
 - ii. A grab sample once per month for FOG
 - iii. A grab sample once per month for pH
 - iv. A composite sample once per month for TN and TP
 - c. All samples shall be collected through the use of a discrete composite sampler. The sampler and flow meter are the property of the permittee and are required to be working condition at all times.
 - d. The sampling location for Big Ox Energy Siouxland shall be at the agreed upon location of the force main following the collection pit and all pretreatment prior to discharge to the industrial force main which flows to Bennett Lift Station for conveyance to Sioux City for conveyance and treatment.
 - e. The sampling frequency for Big Ox Energy Siouxland shall be:

Parameter	Daily Maximum	Monthly Average	Sampling Location	Sampling Frequency
TSS	N/A	N/A	Effluent Composite Sampler	Once per week

BOD	N/A	N/A	Effluent Composite Sampler	Once per week
FOG	N/A	N/A	Effluent Composite Sampler	Once per week
Total Nitrogen	N/A	N/A	Effluent Composite Sampler	Once per week
Total Phosphorous	N/A	N/A	Effluent Composite Sampler	Once per week

Prohibition and Enforcement:

1. Sampling and reporting shall be conducted as specified in 40 CFR 403 and in accordance with the City's approved pretreatment program.
 - a. Permitted industries discharging more than 25,000 GPD shall be sampled once per week, unless otherwise requested by the industry or required based on historical discharge data.
 - b. Permitted industries discharging less than 25,000 GPD shall be sampled once per month, unless otherwise requested by the industry or required based on historical discharge data.
 - c. All samples shall be collected using 24-hour composite sampling methodology.
 - d. For the purposes of this permit the City has agreed to undertake the sampling and reporting, in the event that the City is not capable or able to complete this requirement it is the responsibility of the permittee to complete this in accordance with 40 CFR 136 for the permitted and billable parameters.
2. Big Ox Energy Siouxland, shall be required to install, operate and maintain an effluent flow meter to determine the total amount and rate of flow for the facility discharge and a discrete effluent sampler for the collection of discharge samples based on flow pacing. The permit holder shall purchase and install, at its own expense, a flow measuring device which shall record total daily and monthly flow, maximum hourly flow, and time of day of all such flows. Said flow measuring device(s) shall be acceptable to the City and accessible for inspection by the City. Additionally, the devices shall be maintained in accordance with manufacturer's recommendations and calibrations of said devices shall be performed on a schedule provided by the City, all at the permit holder's expense. The City, at the discretion of the Pretreatment Manager, reserves the right to require separate and/or additional and/or redundant discharge metering devices for certain discharges if deemed necessary.
3. The permittee is prohibited from increasing the use of potable or process water or in any way attempting to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the effluent discharge limitations set forth in this permit.
4. Bypass of any pretreatment process is prohibited unless it is unavoidable to prevent loss of life, personal injury, severe property damage, or no feasible alternative exists. In the event of a bypass the permittee is shall notify the Pretreatment Office as soon as possible:
 - a. Advance notice, in writing, shall be submitted to the Pretreatment Office at least ten (10) days prior to the proposed bypass for review and approval/denial,
 - b. An unanticipated or accidental bypass shall be reported immediately to the WWTP operations staff at 712-203-3160 and formal notification made to the Pretreatment Office via phone 712-898-6793 and email or fax including the following:
 - i. Description of the bypass, its cause, duration, and pollutants of concern,
 - ii. Whether or not the bypass has ceased, and
 - iii. The steps taken to reduce, eliminate and/or prevent the reoccurrence of the bypass.
5. In the event that the permit holder is found to be in non-compliance with any ordinance(s) or regulations pertaining to the nature of this permit, the Pretreatment Manager will provide notice to the permit holder immediately upon becoming aware of the violation. The permit holder is expected to fix the issue of noncompliance immediately and will have ten (10) days thereafter to respond in writing to the Pretreatment Office. The response shall include the identified nature or cause of the violation, and the steps taken to mitigate further violations of the same nature from occurring. Failure to do so will result in escalation of enforcement and may invalidate the permit and subject the permit holder to civil and/or criminal

prosecution. The ten (10) day period provided for correction of deficiencies does not relieve and/or release the permit holder from any liabilities arising from said non-compliance and additional violation(s) of the same nature can be issued during that timeframe causing an additional escalation of enforcement.

6. Failure to comply with the requirements of this permit may be ground for administrative action or enforcement proceedings including but not limited to those contained in the City's Enforcement Response Plan and Municipal Code Chapter 13.08.09. Failure to comply may also result in the termination of the permit for the following reasons including but not limited to:
- a. Falsifying self-monitoring reports,
 - b. Tampering with monitoring equipment,
 - c. Refusing to allow timely access to the facility premises and/or records,
 - d. Continuous violations of effluent limitations,
 - e. Illicit discharge of waste that causes interference or pass through,
 - f. Failure to pay fines,
 - g. Failure to pay sewer charges, and
 - h. Failure to meet compliance schedules.
7. As a condition precedent, the permit holder will agree to hold harmless the City and the City's employees from any liabilities arising from the permit holder's operations under this permit.

Prior to discharge under this Temporary Discharge Permit a final facility walk through must be completed by the Pretreatment Manager. During the optimization sample may be collected daily for documentation and tracking. Once the facility is operational a 90 Day Baseline Monitoring shall be completed to track and trend the discharge concentrations.

The Permit has been issued based on the information provided on your Permit Application and/or surveillance by Utilities representatives. Following the closure of the attached compliance schedule, which includes the baseline monitoring, a determination shall be made on the characteristics of the wastewater and at such time all applicable permit limits shall be issued. A new discharge permit may, with additional limits may be required if the characteristics of the water indicated on this permit change.

A renewal permit application must be submitted no later than 90 days prior to the above expiration date, if permittee wishes to continue discharging after said date.

By:

Danica McCarlen

Issued this

31st
Day

of

January
Month

2017
Year

Attachment 13

Determined to be Confidential Business Information

Sioux City, Iowa WWTP
Industrial Billing

CHS
395 164th St.
South Sioux City, NE 68776

Account #

83646-1014018

Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Grease Conc mg/l	Daily lbs/d	Monthly Avg. lbs/d	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	Limits Exceeded
9/1/2016		615	32	0	0	0	1596	0		
9/2/2016				0	0	0	429	0		
9/3/2016				0	0	0	2270	0		
9/4/2016				0	0	0	4654	0		
9/5/2016				0	0	0	1712	0		
9/6/2016				0	0	0	6153	0		
9/7/2016				0	0	0	6514	0		
9/8/2016				0	0	0	6639	0		
9/9/2016				0	0	0	4530	0		
9/10/2016				0	0	0	2700	0		
9/11/2016				0	0	0	5242	0		
9/12/2016		2960	1	0	0	0	6636	0		
9/13/2016				0	0	0		0		
9/14/2016				0	0	0		0		
9/15/2016				0	0	0	6649	0		
9/16/2016				0	0	0	2703	0		
9/17/2016				0	0	0	136	0		
9/18/2016		1180	10	0	0	0	5680	0		
9/19/2016				0	0	0	6656	0		
9/20/2016				0	0	0	5264	0		
9/21/2016				0	0	0	4898	0		
9/22/2016				0	0	0	2267	0		
9/23/2016				0	0	0	290	0		
9/24/2016				0	0	0	7744	0		
9/25/2016				0	0	0	5864	0		
9/26/2016				0	0	0		0		
9/27/2016		157		0	0	0	1092	0		
9/28/2016		1471		0	0	0	4104	0		
9/29/2016				0	0	0		0		
9/30/2016				0	0	0	7984	0		
Total	17.488	1277	14				4393			

Adjusted

Calculations

Average Sampled Flow	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate
Flow			17.488	0.564		
TSS	1277	186192		6006	TSS (mg/L)	TSS (\$/pound) 0.12
O&G	14	2091		67	O&G (mg/L)	O&G (\$/pound) 0.22
BOD	4393	640651		20666	BOD (mg/L)	BOD (\$/pound) 0.239

Actual Costs

Total Monthly Flow (1000 gallons)	(\$/1000 gal)	Total	Monthly Permit Fee	Monthly Sample and Analysis Fee
17488	\$2.397		\$500.00	\$1,237.00

Extra Strength

	Domestic Strength	Cost for Treatment	Total Strength
	Charge (\$/lbs)	unit cost	Charge
TSS	43755	\$0.00	\$0.120
O&G	14585	\$0.00	\$0.220
BOD	36462	\$0.00	\$0.239
			\$161,493.59
			\$161,493.59

Total \$163,230.59
Tax
Total \$163,230.59

Sioux City, Iowa WWTP
Industrial Billing

CHS
395 164th St.
South Sioux City, NE 68776

Account # 83648-1014018

Date Sampled	Flow		S.S.		Grease		B.O.D.		pH		Limits Exceeded
	Daily mgd	Conc mg/L	Daily lbs/d	Conc mg/L	Daily lbs/d	Conc mg/L	Daily lbs/d	Conc mg/L	Daily lbs/d		
10/1/2016	0.468		0		0		24777	6348	24777		
10/2/2016	0.468		0		0		14996	3842	14996		
10/3/2016	0.468		0		0		18903	4843	18903		
10/4/2016	0.542		0		0		0	0	0		
10/5/2016	0.684	94	536	34	194		33466	6743	33466		
10/6/2016	0.329	216	593		0		3096	2936	3096		
10/7/2016	0.58		0		0		28617	5916	28617		
10/8/2016	0.58		0		0		43149	9954	43149		
10/9/2016	0.58		0		0		45396	9424	45396		
10/10/2016	0.021		0		0		0	0	0		
10/11/2016	0.053		0		0		0	0	0		
10/12/2016	0.053		0		0		0	0	0		
10/13/2016	0.502	1720	720	23	0		2723	6180	2723		
10/14/2016	0.502		0		0		0	3271	0		
10/15/2016	0.502		0		0		0	2078	0		
10/16/2016	0.593		0		0		0	0	0		
10/17/2016	0.486		0		0		0	7971	0		
10/18/2016	0.401		0		0		0	8062	0		
10/19/2016	0.541	2180	9836		0		0	7850	0		
10/20/2016	0.541		0		0		0	4660	0		
10/21/2016	0.541		0		0		0	4080	0		
10/22/2016	0.541		0		0		0	4182	0		
10/23/2016	0.541		0		0		0	0	0		
10/24/2016	0.541	2880	1299		0		0	7390	0		
10/25/2016	0.423		0		0		0	9980	0		
10/26/2016	0.621		0		0		0	6048	0		
10/27/2016	0.876		0		0		0	31823	0		
10/28/2016	0.876		0		0		0	3893	0		
10/29/2016	0.378		0		0		0	3850	0		
10/30/2016	0.378		0		0		0	4939	0		
10/31/2016	0.378		0		0		0	5818	0		
Total	14.988	1418	1005	29	0		0	7570	23865	0	

Adjusted Calculations

Average Sampled Flow		(MGD)		Monthly Avg.		Domestic Strength		Discharge Rate	
Conc. (mg/L)	Pounds	Flow	Pounds	Conc. (mg/L)	Pounds	TSS (mg/L)	O&G (mg/L)	TSS (\$/pound)	O&G (\$/pound)
1418	177250	14.988	177250	0.483	5718	300	100	0.12	0.22
29	3562		3562	115	23840	250		0.239	
5912	739040		739040						

Actual Costs

Total Monthly Flow (1000 gallons)	\$2.397	Total	Monthly Permit Fee	\$500.00
14988			Monthly Sample and Analysis Fee	\$904.00

Extra Strength

	Domestic Strength		Cost for Treatment		Total Strength	
	Pounds	Charge (\$/lbs)	Pounds	unit cost	Charge	Charge
TSS	37500	\$0.00	37500	\$0.120	\$16,769.99	\$16,769.99
O&G	12500	\$0.00	12500	\$0.220	\$0.00	\$0.00
BOD	31250	\$0.00	31250	\$0.239	\$169,161.70	\$169,161.70
					\$185,931.69	\$185,931.69

Total \$187,335.69
Tax
Total \$187,335.69

Date Sampled	Flow mgd	S.S. Conc mg/l	Daily lbs/d	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	Limits Exceeded
11/1/2016	0.537	1930	3644		0	3806	16150		
11/2/2016	0.442	850	3133		0	1025	3778		
11/3/2016	0.442	3900	14376		0	9380	34677		
11/4/2016	0.442	1800	6635		0	7985	29335		
11/5/2016	0.516	787	3301		0	7865	33347		
11/6/2016	0.516	2417	10401		0	8016	37166		
11/7/2016	0.516	2833	12192		0		37166		
11/8/2016	0.516	1717	7339		0	6478	27878		
11/9/2016	0.568	2100	9348	28	133	6328	29576		
11/10/2016	0.568	1183	5604		0	3890	18427		
11/11/2016	0.444	80	296		0	116	130		
11/12/2016	0.444	1433	5306		0	2960	10361		
11/13/2016	0.444	1567	5303		0	5600	20737		
11/14/2016	0.444	1233	4668		0	7057	26132		
11/15/2016	0.444	567	2100		0	3486	12909		
11/16/2016	0.436				0	3506	12749		
11/17/2016	0.436	700	2545		0		0		
11/18/2016	0.436	4000	14545		0		0		
11/19/2016	0.227	1350	2556		0		0		
11/20/2016	0.227				0		0		
11/21/2016	0.227				0		0		
11/22/2016	0.227				0		0		
11/23/2016	0.227				0		0		
11/24/2016	0.012				0		0		
11/25/2016	0.012				0		0		
11/26/2016	0.012				0		0		
11/27/2016	0.012				0		0		
11/28/2016	0.012				0		0		
11/29/2016	0.012				0	127	13		
11/30/2016	0.024				0	90	90		
Total	9.822	1690	3850	0	0	4727			

Adjusted

Calculations

Average Sampled Flow	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate
Flow			9.822	0.317		
TSS	1690	138469		4467	TSS (mg/L)	TSS (\$/pound) 0.12
O&G	0	0		0	O&G (mg/L)	O&G (\$/pound) 0.22
BOD	4727	387210		12491	BOD (mg/L)	BOD (\$/pound) 0.239

Actual Costs

Total Monthly Flow (1000 gallons)	\$2,397	9822	Monthly Permit Fee Monthly Sample and Analysis Fee	\$500.00 \$623.00
--------------------------------------	---------	------	---	----------------------

Extra Strength

	Domestic Strength		Cost for Treatment		Total Strength
	Pounds	Charge (\$/lbs)	unit cost	T1 Charge	
TSS	24575	\$0.00	\$0.120	\$13,667.32	Change
O&G	8192	\$0.00	\$0.220	\$0.00	\$13,667.32
BOD	20479	\$0.00	\$0.239	\$87,648.72	\$0.00
				\$101,316.05	\$87,648.72
					\$101,316.05

Total \$102,439.05
Tax
Total \$102,439.05

Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	Limits Exceeded
12/1/2016	0.024	20		0	71	0		
12/2/2016	0.024			0		0		
12/3/2016	0.187	115	11	179	3295	5439		
12/4/2016	0.187			0		0		
12/5/2016	0.187			0	5443	8489		
12/6/2016	0.187			0		0		
12/7/2016	0.187			0		0		
12/8/2016	0.187			0	3252	15072		
12/9/2016	0.187			0		0		
12/10/2016	0.376			0		0		
12/11/2016	0.376	3460		10850		7693		
12/12/2016	0.376			0	2450	11458		
12/13/2016	0.376			0	3654	11458		
12/14/2016	0.344			0	5998	15167		
12/15/2016	0.344			0	6146	17633		
12/16/2016	0.344			0	9536	27358		
12/17/2016	0.303			0	3714	9385		
12/18/2016	0.303			0	342	864		
12/19/2016	0.303			0	7438	18766		
12/20/2016	0.303			0	7040	17790		
12/21/2016	0.315	1560	43	4098	5953	163		
12/22/2016	0.315	660	48	1724	6854	126		
12/23/2016	0.315			0		0		
12/24/2016	0.009			0		0		
12/25/2016	0.009			0		0		
12/26/2016	0.009			0		0		
12/27/2016	0.009			0		0		
12/28/2016	0.001			0		0		
12/29/2016	0.001			0		0		
12/30/2016	0.001			0		0		
12/31/2016	0.027			0		0		
Total	6.116	1163	0	544	4706			

Adjusted

Calculations

Average Sampled Flow

Flow	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate
TSS	1163	59322	6.116	0.197	TSS (mg/L)	TSS (\$/pound) 0.12
O&G	0	0		1914	O&G (mg/L)	O&G (\$/pound) 0.22
BOD	4706	240027		7743	BOD (mg/L)	BOD (\$/pound) 0.239

Actual Costs

Total Monthly Flow	Monthly Permit Fee
(1000 gallons) \$2,397	Monthly Sample and Analysis Fee
6116	\$500.00
	\$597.00


Extra Strength

	Domestic Strength	Cost for Treatment	Total Strength
Pounds	Charge (\$/lbs)	unit cost	Charge
TSS	15302	\$0.00	\$0.120
O&G	5101	\$0.00	\$5,282.33
BOD	12752	\$0.00	\$0.00
		\$0.239	\$54,318.86
			\$59,601.19

Total \$60,698.19
Tax
Total \$60,698.19

CHS
395 164th St.
South Sioux City, NE 68776

83646-1014018

[illegible]

Sioux City, Iowa WWTP
Industrial Billing

BPI
89 Two Rivers Dr.
Dakota Dunes, SD 57049

Account # 52862-1008932

Date Sampled	Flow mgd	S.S. Conc mg/l	Grease Daily lbs/d	Grease Conc mg/l	B.O.D. Daily lbs/d	B.O.D. Conc mg/l	pH	FOG mg/L
9/1/2016	0.887	345	2552	123	910	566		1187
9/2/2016	0.887		0		0			0
9/3/2016	0.348		0		0			0
9/4/2016	0.348		0		0			0
9/5/2016	0.348		0		0			0
9/6/2016	0.348		0		0			0
9/7/2016	0.829	188	1000	112	774	343		237
9/8/2016	0.829		0		0			0
9/9/2016	0.829		0		0			0
9/10/2016	0.610		0		0			0
9/11/2016	0.610		0		0			0
9/12/2016	0.610	356	1034	169	860	354		180
9/13/2016	0.610		0		0			0
9/14/2016	0.842		0		0			0
9/15/2016	0.842		0		0			0
9/16/2016	0.679	204	1155	216	1226	269		523
9/17/2016	0.679		0		0			0
9/18/2016	0.679		0		0			0
9/19/2016	0.679		0		0			0
9/20/2016	0.679		0		0			0
9/21/2016	0.879		0		0			0
9/22/2016	0.879		0		0			0
9/23/2016	0.879		0		0			0
9/24/2016	0.662		0		0			0
9/25/2016	0.662		0		0			0
9/26/2016	0.662		0		0			0
9/27/2016	0.662		0		0			0
9/28/2016	0.751		0		0			0
9/29/2016	0.751		0		0			0
9/30/2016	0.751		0		0			0
Total	20.710	273		155		383		

Calculations

Average Sampled Flow		Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate	
Flow				20.710	0.668			
TSS		273	47196		1522	TSS (mg/L)	0.12	
O&G		155	26772		864	O&G (mg/L)	0.22	
BOD		383	66152		2134	BOD (mg/L)	0.239	
Actual Costs								
Total Monthly Flow		Total		Monthly Permit Fee		\$500.00		
(1000 gallons)		(\$/1000 gal)		Monthly Sample and Analysis Fee		\$300.00		
20710		\$2.397						
Extra Strength								
		Domestic Strength		Cost for Treatment		Total Strength		
		Pounds	Charge (\$/lbs)	Pounds	unit cost	T1 Charge	Charge	
TSS		51816	\$0.00	0	\$0.120	\$0.00	\$0.00	
O&G		17272	\$0.00	9500	\$0.165	\$1,567.45	\$1,567.45	
BOD		43180	\$0.00	22972	\$0.239	\$5,490.30	\$5,490.30	
			\$0.00			\$7,057.74	\$7,057.74	
		Total						\$7,857.74
		Tax						Total
								\$7,857.74

Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
10/1/2016	0.751			0		0		
10/2/2016	0.751			0		0		
10/3/2016	0.751			0		0		
10/4/2016	0.751			0		0		
10/5/2016	0.819			0		0		
10/6/2016	0.819			0		0		
10/7/2016	0.819			0		0		
10/8/2016	0.553			0		0		
10/9/2016	0.553			0		0		
10/10/2016	0.553			0		0		
10/11/2016	0.824			0		0		
10/12/2016	0.824			0		0		
10/13/2016	0.824	680	31	4673	920	6322		
10/14/2016	0.824			0		0		
10/15/2016	0.592			0		0		
10/16/2016	0.592			0		0		
10/17/2016	0.592			0		0		
10/18/2016	0.592			0		0		
10/19/2016	0.873	372		2708	459	3342		
10/20/2016	0.873			0		0		
10/21/2016	0.721			0		0		
10/22/2016	0.721	212		1275	349	2099		
10/23/2016	0.721			0		0		
10/24/2016	0.721			0		0		
10/25/2016	0.721			0		0		
10/26/2016	0.944	245		1929		0		
10/27/2016	0.944			0	696	5480		
10/28/2016	0.944			0		0		
10/29/2016	0.630			0		0		
10/30/2016	0.630			0		0		
10/31/2016	0.630			0		0		
Total	22.857	377	31		606			

Calculations

Average Sampled Flow	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate
Flow	377	71914	22.857	0.737		
TSS	31	5909		2320	TSS (mg/L)	300
O&G		115520		191	O&G (mg/L)	100
BOD				3726	BOD (mg/L)	250

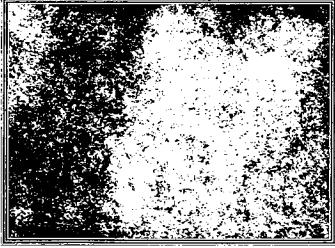
Actual Costs

Total Monthly Flow	Monthly Permit Fee	Monthly Sample and Analysis Fee
(1000 gallons)		
22857	\$500.00	\$213.00

Extra Strength

	Domestic Strength	Cost for Treatment	Total Strength
	Charge (\$/lbs)	unit cost	Charge
TSS	57188	\$0.00	\$1,767.12
O&G	19063	\$0.00	\$0.00
BOD	47657	\$0.00	\$16,219.34
		\$0.00	\$17,986.46

Total \$18,695.46
Tax
Total \$18,695.46



Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Daily lbs/d	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
11/1/2016	0.630								
11/2/2016	0.942	333	2616			891	5429		
11/3/2016	0.942	893	2016			1087	3340		
11/4/2016	0.942								
11/5/2016	0.687								
11/6/2016	0.687								
11/7/2016	0.687	388	2223	350	2005	598	3415		
11/8/2016	0.687								
11/9/2016	0.942								
11/10/2016	0.942								
11/11/2016	0.698								
11/12/2016	0.698								
11/13/2016	0.698								
11/14/2016	0.698								
11/15/2016	0.698								
11/16/2016	0.857								
11/17/2016	0.857								
11/18/2016	0.857								
11/19/2016	0.712								
11/20/2016	0.712								
11/21/2016	0.712								
11/22/2016	0.712								
11/23/2016	0.712								
11/24/2016	0.611								
11/25/2016	0.611								
11/26/2016	0.611	324	1851	152	1775	641	3266		
11/27/2016	0.611								
11/28/2016	0.611								
11/29/2016	0.611								
11/30/2016	0.961								
Total	22.966	485		251			754		

Calculations

Average Sampled Flow		Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate	
Flow				22.966	0.741			
TSS		485	92799		2994	TSS (mg/L)	300	TSS (\$/pound) 0.12
O&G		251	48076		1551	O&G (mg/L)	100	O&G (\$/pound) 0.22
BOD		754	144371		4657	BOD (mg/L)	250	BOD (\$/pound) 0.239
Actual Costs								
Total Monthly Flow (1000 gallons)					Monthly Permit Fee		\$500.00	
22966 (\$2.397)				Total	Monthly Sample and Analysis Fee		\$242.00	
Extra Strength								
		Domestic Strength		Cost for Treatment		Total Strength		
Pounds		Charge (\$/lbs)		Pounds	unit cost	T1 Charge		
57461		\$0.00		35838	\$0.120	\$4,240.62		\$4,240.62
19154		\$0.00		28922	\$0.220	\$6,362.84		\$6,362.84
47884		\$0.00		96486	\$0.239	\$23,060.27		\$23,060.27
		\$0.00				\$33,663.73		\$33,663.73

Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Grease Daily lbs/d	Grease Conc mg/l	B.O.D. Daily lbs/d	B.O.D. Conc mg/l	pH	FOG mg/L
12/1/2016	0.961		0		0			
12/2/2016	0.961		0		0			
12/3/2016	0.659	102	561	88	484	426		2341
12/4/2016	0.659		0		0			0
12/5/2016	0.659		0		0			0
12/6/2016	0.659		0		0			0
12/7/2016	0.933		0		0			0
12/8/2016	0.933		0		0			0
12/9/2016	0.933		0		0			0
12/10/2016	0.617		0		0			0
12/11/2016	0.617		0		0			0
12/12/2016	0.617		0		0			0
12/13/2016	0.617		0		0			0
12/14/2016	0.917		0		0			0
12/15/2016	0.917	474	3625	373	2853	1494		11426
12/16/2016	0.917		0		0			0
12/17/2016	0.655		0		0			0
12/18/2016	0.655		0		0			0
12/19/2016	0.655	394	2152	293	1601	554		3026
12/20/2016	0.655		0		0			0
12/21/2016	0.918		0		0			0
12/22/2016	0.918		0		0			0
12/23/2016	0.918		0		0			0
12/24/2016	0.333		0		0			0
12/25/2016	0.333		0		0			0
12/26/2016	0.333	248	689	155	430	611		1697
12/27/2016	0.333		0		0			0
12/28/2016	0.832		0		0			0
12/29/2016	0.832		0		0			0
12/30/2016	0.832		0		0			0
12/31/2016	0.442		0		0			0
Total	22.220	305		227		771		

Calculations

Average Sampled Flow	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate
Flow				0.717		
TSS	305	56428	22.220	1820	TSS (mg/L)	TSS (\$/pound) 0.12
O&G	227	42113		1358	O&G (mg/L)	O&G (\$/pound) 0.22
BOD	771	142924		4610	BOD (mg/L)	BOD (\$/pound) 0.239


Actual Costs

Total Monthly Flow (1000 gallons)	22220	Monthly Permit Fee	\$500.00
(\$/1000 gal)	\$2.397	Monthly Sample and Analysis Fee	\$300.00

Extra Strength

	Domestic Strength	Cost for Treatment	Total Strength
Pounds	Charge (\$/lbs)	unit cost	Charge
TSS	55594	\$0.00	\$100.07
O&G	18531	\$0.00	\$5,187.89
BOD	46329	\$0.00	\$23,086.29
		\$0.239	\$28,374.24
			\$28,374.24

Total \$29,174.24
Tax 0.22
Total \$29,174.24



	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate
Flow			20.657	0.666		
TSS	415	71541		2308	TSS (mg/L)	300
O&G	#DIV/0!	#DIV/0!		#DIV/0!	O&G (mg/L)	100
BOD	660	113655		3666	BOD (mg/L)	250
						TSS (\$/pound) 0.12 O&G (\$/pound) 0.22 BOD (\$/pound) 0.239

Total Monthly Flow (1000 gallons) (\$/1000 gal)		
Monthly Permit Fee		\$500.00
Monthly Sample and Analysis Fee		
Total		

	Domestic Strength		Cost for Treatment		Total Strength Charge
	Pounds	Charge (\$/lbs)	unit cost	T1 Charge	
TSS	51684	\$0.00	19857	\$0.120	\$2,382.90
O&G	17228	\$0.00	#DIV/0!	\$0.220	#DIV/0!
BOD	43070	\$0.00	70585	\$0.239	\$16,869.89
		\$0.00		#DIV/0!	#DIV/0!

Total Tax Total

Sioux City, Iowa WWTP
Industrial Billing

Richardson Milling Inc
P.O. Box 16
South Sioux City, NE 68776

Account # 71729-1007735

Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
9/1/2016	0.009			0		0		
9/2/2016	0.009			0		0		
9/3/2016	0.014			0		0		
9/4/2016	0.014			0		0		
9/5/2016	0.014	38	49	0	3464	0		
9/6/2016	0.014			0		0		
9/7/2016	0.009			0		0		
9/8/2016	0.009			0		0		
9/9/2016	0.009			0		0		
9/10/2016	0.007			0		0		
9/11/2016	0.007			0		0		
9/12/2016	0.007			0		0		
9/13/2016	0.007			0		0		
9/14/2016	0.001	432	257	0	7829	0		
9/15/2016	0.001			0		0		
9/16/2016	0.010			0		0		
9/17/2016	0.010	1353	30993	0	16987	0		
9/18/2016	0.010			0		0		
9/19/2016	0.010			0		0		
9/20/2016	0.010			0		0		
9/21/2016	0.014			0		0		
9/22/2016	0.014			0		0		
9/23/2016	0.014			0		0		
9/24/2016	0.017			0		0		
9/25/2016	0.017			0		0		
9/26/2016	0.017			0		0		
9/27/2016	0.017			0		0		
9/28/2016	0.011			0		0		
9/29/2016	0.011			0		0		
9/30/2016	0.011			0		0		
Total	0.324	608	10433			9427		

Calculations									
Average Sampled Flow					Discharge Rate				
	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength		TSS (\$/pound)		0.12
Flow			0.324	0.010					
TSS	608	1642		53	TSS (mg/L)	300	O&G (\$/pound)	100	0.22
O&G	10433	28192		909	O&G (mg/L)	100	BOD (\$/pound)	250	0.239
BOD	9427	25472		822	BOD (mg/L)				
Actual Costs					Monthly Permit Fee				
Total Monthly Flow (1000 gallons)					Monthly Sample and Analysis Fee				
324					\$500.00				
\$2,397					\$225.00				
Extra Strength									

Sioux City, Iowa WWTP
Industrial Billing

Richardson Milling Inc
P.O. Box 16
South Sioux City, NE 68776

Account # 71729-1007735

Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Daily lbs/d	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
10/1/2016	0.011								
10/2/2016	0.011								
10/3/2016	0.011								
10/4/2016	0.011								
10/5/2016	0.009								
10/6/2016	0.009								
10/7/2016	0.009								
10/8/2016	0.011								
10/9/2016	0.011								
10/10/2016	0.011								
10/11/2016	0.010								
10/12/2016	0.010	432	36	158	3	6401	534		
10/13/2016	0.010								
10/14/2016	0.010								
10/15/2016	0.016								
10/16/2016	0.016	1492	193	579	7	16180	2169		
10/17/2016	0.016								
10/18/2016	0.016								
10/19/2016	0.006	220	11			956	48		
10/20/2016	0.006								
10/21/2016	0.006								
10/22/2016	0.006								
10/23/2016	0.006								
10/24/2016	0.006								
10/25/2016	0.006								
10/26/2016	0.009	595	45			10632	738		
10/27/2016	0.009								
10/28/2016	0.009								
10/29/2016	0.009								
10/30/2016	0.009								
10/31/2016	0.009								
Total	0.304	685		369		8542			

Calculations

Average Sampled Flow Conc. (mg/L)	Pounds	(MGD)	Monthly Avg. 0.010	Domestic Strength TSS (mg/L)	Discharge Rate TSS (\$/pound)
Flow	685	0.304	56	300	0.12
TSS	369		30	100	0.22
O&G	8542		699	250	0.239
BOD					

Actual Costs

Total Monthly Flow (1000 gallons)	304	Monthly Permit Fee	\$500.00
(\$/1000 gal)	\$2.397	Monthly Sample and Analysis Fee	\$242.00

Extra Strength

	Domestic Strength Charge (\$/lbs)	Pounds	Cost for Treatment unit cost	Total Strength Charge
TSS	761	\$0.00	\$0.120	\$117.06
O&G	254	\$0.00	\$0.220	\$149.76
BOD	634	\$0.00	\$0.239	\$5,024.70
				\$5,291.52

Total \$6,033.52
Tax
Total \$6,033.52

Sioux City, Iowa WWTP
Industrial Billing

Richardson Milling Inc
P.O. Box 16
South Sioux City, NE 68776

Account # 71729-1007735

Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
11/1/2016	0.009			0		0		
11/2/2016	0.009			0		0		
11/3/2016	0.009	2427		182		953		
11/4/2016	0.009			0		0		
11/5/2016	0.006			0		0		
11/6/2016	0.006			0		0		
11/7/2016	0.006			0		0		
11/8/2016	0.006			0		0		
11/9/2016	0.022	388	322	71	1750	321		
11/10/2016	0.022			0		0		
11/11/2016	0.014			0		0		
11/12/2016	0.014			0		0		
11/13/2016	0.014			0		0		
11/14/2016	0.014			0		0		
11/15/2016	0.014			0		0		
11/16/2016	0.015			0		0		
11/17/2016	0.015			0		0		
11/18/2016	0.015			0		0		
11/19/2016	0.011	1284		118	7225	663		
11/20/2016	0.011			0		0		
11/21/2016	0.011			0		0		
11/22/2016	0.011			0		0		
11/23/2016	0.011			0		0		
11/24/2016	0.005			0		0		
11/25/2016	0.005			0		0		
11/26/2016	0.005			0		0		
11/27/2016	0.005			0		0		
11/28/2016	0.005			0		0		
11/29/2016	0.005			0		0		
11/30/2016	0.005			0		0		
Total	0.309	1366	322	0	7225	0		

Calculations

Average Sampled Flow	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate
Flow	1366	3521	0.309	0.010		
TSS	322	830		114	TSS (mg/L)	TSS (\$/pound)
O&G	7225	18620		27	O&G (mg/L)	O&G (\$/pound)
BOD				601	BOD (mg/L)	BOD (\$/pound)

Actual Costs

Total Monthly Flow (1000 gallons)	309	Monthly Permit Fee	\$500.00
(\$/1000 gal)	\$2.397	Monthly Sample and Analysis Fee	\$242.00

Extra Strength

	Domestic Strength	Cost for Treatment	Total Strength
Pounds	Charge (\$/lbs)	unit cost	Charge
TSS	773	\$0.00	\$329.76
O&G	258	\$0.00	\$125.86
BOD	644	\$0.00	\$4,296.23
		\$0.239	\$4,751.85

Total \$5,493.85
Tax
Total \$5,493.85

Sioux City, Iowa WWTP
Industrial Billing

Richardson Milling Inc
P.O. Box 16
South Sioux City, NE 68776

Account #

71729-1007735

Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
12/1/2016	0.005	873	636	36	20165	844		
12/2/2016	0.005			0		0		
12/3/2016	0.007			0		0		
12/4/2016	0.007			0		0		
12/5/2016	0.007			0		0		
12/6/2016	0.007			0		0		
12/7/2016	0.007	1868	7503	109	7992	467		
12/8/2016	0.007			0		0		
12/9/2016	0.007			0		0		
12/10/2016	0.011			0		0		
12/11/2016	0.011			0		0		
12/12/2016	0.011			0		0		
12/13/2016	0.011			0		0		
12/14/2016	0.014			0		0		
12/15/2016	0.014	1034	10204	121	24252	2832		
12/16/2016	0.014			0		0		
12/17/2016	0.013			0		0		
12/18/2016	0.013			0		0		
12/19/2016	0.013	728	377	73	12298	6333		
12/20/2016	0.013			0		0		
12/21/2016	0.011			0		0		
12/22/2016	0.011			0		0		
12/23/2016	0.011			0		0		
12/24/2016	0.011			0		0		
12/25/2016	0.011			0		0		
12/26/2016	0.011			0		0		
12/27/2016	0.011			0		0		
12/28/2016	0.013	1120		121		1199		
12/29/2016	0.013			0		0		
12/30/2016	0.013			0		0		
12/31/2016	0.013			0		0		
Total	0.326	1125	4680	0	15154	0		

Calculations

Average Sampled Flow	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate
Flow			0.326	0.011		
TSS	1125	3058		99	TSS (mg/L)	TSS (\$/pound) 0.12
O&G	4880	12724		410	O&G (mg/L)	O&G (\$/pound) 0.22
BOD	15154	41201		1329	BOD (mg/L)	BOD (\$/pound) 0.239

Actual Costs

Total Monthly Flow (1000 gallons)	326	Monthly Permit Fee	\$500.00
	\$2,397	Monthly Sample and Analysis Fee	\$375.00

Extra Strength

	Pounds	Domestic Strength Charge (\$/lb)	Pounds	unit cost	Cost for Treatment T1 Charge	Total Strength Charge
TSS	816	\$0.00	2242	\$0.120	\$269.03	\$269.03
O&G	272	\$0.00	42452	\$0.220	\$2,739.50	\$2,739.50
BOD	680	\$0.00	40524	\$0.239	\$9,684.53	\$9,684.53
		\$0.00			\$12,693.07	\$12,693.07

Total \$13,568.07
Tax
Total \$13,568.07

Sioux City, Iowa WWTP
Industrial Billing

Richardso
P.O. Box 1
South Sioux City, NE 68776

Account # 71729-1007735

Date Sampled	Flow Daily mgd	S.S. Conc mg/l	Grease Daily lbs/d	Grease Conc mg/l	B.O.D. Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
1/1/2017	0.010		0		0		0		
1/2/2017	0.010		0		0		0		
1/3/2017	0.010		0		0		0		
1/4/2017	0.010	1500	125		0	882	741		
1/5/2017	0.010	732	61		0	14021	1169		
1/6/2017	0.010		0		0		0		
1/7/2017	0.013	1580	171		0	15410	1671		
1/8/2017	0.013	1015	110		0		0		
1/9/2017	0.013	1730	188		0		0		
1/10/2017	0.013		0		0		0		
1/11/2017	0.008	795	53		0		0		
1/12/2017	0.008	695	46		0	9139	610		
1/13/2017	0.008		0		0		0		
1/14/2017	0.012	1100	110		0		0		
1/15/2017	0.012	160	16		0	8955	896		
1/16/2017	0.012	575	58		0	4572	458		
1/17/2017	0.012	300	30		0	6649	665		
1/18/2017	0.009	500	38		0	7312	732		
1/19/2017	0.009	670	50		0		0		
1/20/2017	0.009		0		0	1340	101		
1/21/2017	0.010	577	48		0		0		
1/22/2017	0.010	884	74		0		0		
1/23/2017	0.010		0		0		0		
1/24/2017	0.010		0		0		0		
1/25/2017	0.011	624	57		0		0		
1/26/2017	0.011	4900	450		0		0		
1/27/2017	0.011		0		0		0		
1/28/2017			0		0		0		
1/29/2017			0		0		0		
1/30/2017			0		0		0		
1/31/2017			0		0		0		
Total	0.284	1079	0	#DIV/0!	0	8476	0		

Calculations

Average Sampled Flow	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Domestic Strength	Discharge Rate
Flow	1079	2555	0.284	0.009	TSS (mg/L)	TSS (\$/pound)
TSS	#DIV/0!	#DIV/0!		82	O&G (mg/L)	O&G (\$/pound)
O&G	8476	20075		#DIV/0!	BOD (mg/L)	BOD (\$/pound)
BOD				648		

Actual Costs

Total Monthly Flow	Monthly Permit Fee
(1000 gallons)	Monthly Sample and Analysis Fee
284	\$500.00
\$2.397	

Extra Strength

	Domestic Strength	Cost for Treatment	Total Strength
	Charge (\$/lbs)	unit cost	Charge
TSS	711	\$0.120	\$221.31
O&G	237	\$0.220	\$52.14
BOD	592	\$0.239	\$139.68

Total #DIV/0!
Tax #DIV/0!
Total #DIV/0!

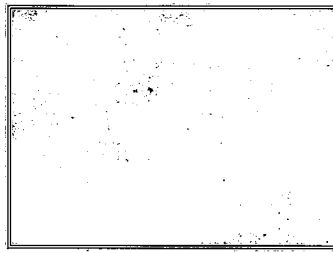
Attachment 14

Determined to be Confidential Business Information

Big O's

City, Iowa WWTP
Industrial Billing

Account #



Date Sampled	Flow Daily mgd	Flow Untreated	S.S. Conc mg/l	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
9/1/2016					0		0		
9/2/2016					0		0		
9/3/2016					0		0		
9/4/2016					0		0		
9/5/2016					0		0		
9/6/2016					0		0		
9/7/2016					0		0		
9/8/2016					0		0		
9/9/2016					0		0		
9/10/2016					0		0		
9/11/2016					0		0		
9/12/2016	1.592	1.309	680	134	9029	3497	46431	5.56	
9/13/2016	1.628	1.028	420	2	5703	2944	39972		
9/14/2016	1.659	1.059	380	56	5258	2308	31934		
9/15/2016	1.666	1.066			0		0		
9/16/2016	1.094	1.086	232		2117	698	6369	7.2	
9/17/2016	1.122	0.522			0		0		
9/18/2016	0.985	0.385			0		0		
9/19/2016	1.530	0.930			0		0		
9/20/2016	1.721	1.121	850		12200	1632	23424	6.6	
9/21/2016	1.844	1.244	640		9843	1412	21715	6.3	
9/22/2016	1.284	0.838	293		3138	389	4166	7.3	
9/23/2016	1.575	1.530	1429		18771	1574	20675	7.0	
9/24/2016	1.232	0.482	300		3082	1290	13255	6.3	
9/25/2016	1.292	0.701	375		4041	2198	23684	5.2	
9/26/2016	1.604	1.604			0		0		
9/27/2016	1.535	1.535	480		6145	893	11432	7.4	
9/28/2016	1.613	1.192	232		3121	1720	23138	5.9	
9/29/2016	1.876	1.876	117		1831	682	10670	7.4	
9/30/2016	1.804	1.804	136		2046	1138	17122	6.7	
Total	28.656	21.312	469	64	0	1598	0		

Calculations									
Average Sampled Flow					Threshold Values				
	Flow	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Tier 1	Tier 2	Extra Strength Unit Costs	
	TSS	469	112053	28.656	0.924	300	1200	TSS (\$/pound)	Tier 1
	O&G	64	15295		3615	100	400	O&G (\$/pound)	0.098
	BOD	1598	381959		493	250	2000	BOD (\$/pound)	0.165
					12321				0.239
Actual Costs									
Total Monthly Flow					Monthly Permit Fee	\$500.00			
(1000 gallons)					Monthly Sample and Analysis Fee	\$1,050.00			
28656					Total				
(\$/1000 gal)									
\$2.397									
Extra Strength									
Domestic Strength					Tier 1 (T1)		Tier 2 (T2)		Total Strength
	Pounds	Charge (\$/lbs)	Pounds	unit cost	T1 Charge	pounds	unit cost	T2 Charge	Charge
TSS	71697	\$0.00	40355	\$0.098	\$3,954.82	0	0.196	\$0.00	\$3,954.82
O&G	23899	\$0.00	0	\$0.165	\$0.00	0	0.33	\$0.00	\$0.00
BOD	59748	\$0.00	322211	\$0.239	\$77,008.46	0	0.478	\$0.00	\$77,008.46
		\$0.00			\$80,963.28			\$0.00	\$80,963.28
Total									\$82,513.28
Tax									\$82,513.28
Total									\$82,513.28

Account # 92906-1015405

**ux City, Iowa WWTP
Industrial Billing**

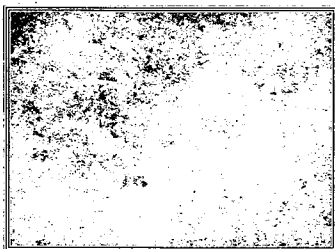
Date Sampled	Flow treated mgd	Flow Untreated	S.S.		Grease		B.O.D.		pH	FOG mg/L
			Conc mg/l	Daily lbs/d	Conc mg/l	Daily lbs/d	Conc mg/l	Daily lbs/d		
10/1/2016										
10/2/2016										
10/3/2016										
10/4/2016			200				1930			
10/5/2016			1800				3140			
10/6/2016										
10/7/2016										
10/8/2016										
10/9/2016										
10/10/2016										
10/11/2016			1140				2563		5.56	
10/12/2016										
10/13/2016										
10/14/2016										
10/15/2016										
10/16/2016			4300		61		2918		7.2	
10/17/2016										
10/18/2016			580				1499			
10/19/2016										
10/20/2016									6.6	
10/21/2016									6.3	
10/22/2016									7.3	
10/23/2016									7.0	
10/24/2016									6.3	
10/25/2016									5.2	
10/26/2016			2450				3253			
10/27/2016									7.4	
10/28/2016									5.9	
10/29/2016									7.4	
10/30/2016									6.7	
10/31/2016										
Total	23.930	21.500	1745		61		2561			

[illegible]

Big O*

Jx City, Iowa WWTP
Industrial Billing

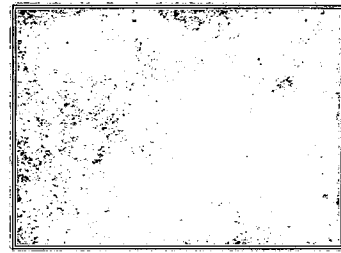
Account # 92906-1015405



Date Sampled	Hauled Waste mgd	S.S. Conc mg/l	Daily lbs/d	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
11/1/2016									
11/2/2016									
11/3/2016									
11/4/2016									
11/5/2016									
11/6/2016									
11/7/2016	0.057	1240				4330	2082		
11/8/2016	0.068	740				4062	2290		
11/9/2016	0.086	1760				3948	2828		
11/10/2016	0.087	8680				3321	2407		
11/11/2016	0.083	3040				4125	2838		
11/12/2016	0.089	2240				3942	2563		
11/13/2016	0.090	3300		47		3975	3591		
11/14/2016	0.116	5000				3683	3560		
11/15/2016	0.064	4650				5561	2545		
11/16/2016									
11/17/2016									
11/18/2016									
11/19/2016									
11/20/2016									
11/21/2016	0.084	8900		81		3331	2342		
11/22/2016	0.103	3750				3668	3145		
11/23/2016	0.139	1680				3401	3597		
11/24/2016	0.148	2400				3405	3203		
11/25/2016	0.137	4300				2893	3077		
11/26/2016	0.111	9050				3366	3176		
11/27/2016	0.109	8950				3988	3625		
11/28/2016	0.180	7850				3616	3428		
11/29/2016	0.148	1180				3216	3970		
11/30/2016	0.176	6050				3304	3850		
Total	2.074	4459		64			3733		

Calculations											
Average Sampled Flow				Threshold Values				Extra Strength Unit Costs			
	Conc. (mg/L)	Pounds	(MGD)	Monthly Avg.	Tier 1	Tier 2	TSS (\$/pound)	Tier 1	Tier 2	O&G (\$/pound)	BOD (\$/pound)
Flow	4459	77120	2.074	0.067	300	1200	0.098	0.098	0.196	0.33	0.478
TSS	64	1107		2488	100	400	0.165	0.165	0.33	0.33	0.478
O&G	3733	64571		36	250	2000	0.239	0.239	0.478	0.478	0.478
BOD				2083							
Actual Costs											
Total Monthly Flow (\$/1000 gallons)				Monthly Permit Fee				Monthly Sample and Analysis Fee			
2073.8				\$500.00				\$932.00			
Total											
Extra Strength											
Domestic Strength				Tier 1 (T1)				Tier 2 (T2)			
Pounds	Charge (\$/lbs)			unit cost	T1 Charge	unit cost		unit cost	T2 Charge		Total Strength Charge
5189	\$0.00			\$0.098	\$1,525.46			0.196	\$11,047.56		\$12,573.02
1730	\$0.00			\$0.165	\$0.00			0.33	\$0.00		\$0.00
4324	\$0.00			\$0.239	\$7,233.84			0.478	\$14,330.62		\$21,564.46
Total				\$8,759.30				\$25,378.18			
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											
Total											

Big Ox



Date Sampled	Hauled Waste mgd	S.S. Conc mg/l	Daily lbs/d	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	pH	FOG mg/L
12/1/2016	0.183	14650				3376	5149		
12/2/2016	0.174	15450		64		2522	3659		
12/3/2016	0.078	7000				4936	3227		
12/4/2016	0.088	5700				4632	3397		
12/5/2016	0.167	3850				4026	5608		
12/6/2016	0.124	7450				4855	4816		
12/7/2016	0.069	8650				4103	3267		
12/8/2016	0.011	4750				4865	452		
12/9/2016	0.000	...				0	0		
12/10/2016	0.098	8650				9722	2968		
12/11/2016	0.116	4750				4437	4291		
12/12/2016	0.000	...				0	0		
12/13/2016	0.077	7150				3840	2450		
12/14/2016	0.072	9450				3426	2061		
12/15/2016	0.094	6600				3804	2976		
12/16/2016	0.110	...				0	0		
12/17/2016	0.063	18950				7336	3953		
12/18/2016	0.000	...				0	0		
12/19/2016	0.131	11650				5108	5598		
12/20/2016	0.063	6800				3092	1626		
12/21/2016	0.038	5900				2815	837		
12/22/2016	0.170	14350				3269	4928		
12/23/2016	0.160	6750				2319	3099		
12/24/2016	0.063	7150				3613	4396		
12/25/2016	0.000	...				0	0		
12/26/2016	0.136	9300				2553	2890		
12/27/2016	0.167	10300				3558	4949		
12/28/2016	0.135	11400				2910	3932		
12/29/2016	0.143	6550				1843	2494		
12/30/2016	0.154	8150				2799	3596		
12/31/2016	0.176	8100				0	0		
Total	2.884	8844		64		3974			

Calculations									
Average Sampled Flow		Conc. (mg/L)		Pounds		Monthly Avg.		Threshold Values	
Flow	8844	212690	2.884	0.093	0.093	TSS (mg/L)	300	Tier 1	Tier 2
TSS	64	1539	0.093	8861	300	O&G (mg/L)	100	300	1200
BOD	3974	95577	0.093	50	250	BOD (mg/L)	250	100	400
Actual Costs		Monthly Permit Fee		Monthly Sample and Analysis Fee		Extra Strength Unit Costs		TSS (\$/pound)	
Total Monthly Flow (1000 gallons)		2883.509		\$2.397		\$500.00		0.098	
Extra Strength		Total		\$1,271.00		BOD (\$/pound)		0.165	
						T2 Charge		0.289	
						unit cost		0.478	
						Total Strength Charge			
						Total		\$72,677.02	
						Tax		\$72,677.02	
						Total		\$72,677.02	

Date	11/1/2016	11/2/2016	11/3/2016	11/4/2016	11/5/2016	11/6/2016	11/7/2016	11/8/2016	11/9/2016	11/10/2016	11/11/2016	11/12/2016	11/13/2016	11/14/2016	11/15/2016	11/16/2016	11/17/2016	11/18/2016	11/19/2016	11/20/2016	11/21/2016	11/22/2016	11/23/2016	11/24/2016	11/25/2016	11/26/2016	11/27/2016	11/28/2016	11/29/2016	11/30/2016	12/1/2016	12/2/2016	12/3/2016	12/4/2016	12/5/2016	12/6/2016	12/7/2016	12/8/2016	12/9/2016	12/10/2016	12/11/2016	12/12/2016	12/13/2016	12/14/2016	12/15/2016	12/16/2016	12/17/2016	12/18/2016	12/19/2016	12/20/2016	12/21/2016	12/22/2016	12/23/2016	12/24/2016	12/25/2016	12/26/2016	12/27/2016	12/28/2016	12/29/2016	12/30/2016	12/31/2016																																																																																																																																																																																																																																																																											
4688	5281	4813	6206	5108	5374	5608	5705	6223	5770	5861	6211	5571	5875	5900	5837	5986	6038	6088	6138	6188	6238	6288	6338	6388	6438	6488	6538	6588	6638	6688	6738	6788	6838	6888	6938	6988	7038	7088	7138	7188	7238	7288	7338	7388	7438	7488	7538	7588	7638	7688	7738	7788	7838	7888	7938	7988	8038	8088	8138	8188	8238	8288	8338	8388	8438	8488	8538	8588	8638	8688	8738	8788	8838	8888	8938	8988	9038	9088	9138	9188	9238	9288	9338	9388	9438	9488	9538	9588	9638	9688	9738	9788	9838	9888	9938	9988	10038	10088	10138	10188	10238	10288	10338	10388	10438	10488	10538	10588	10638	10688	10738	10788	10838	10888	10938	10988	11038	11088	11138	11188	11238	11288	11338	11388	11438	11488	11538	11588	11638	11688	11738	11788	11838	11888	11938	11988	12038	12088	12138	12188	12238	12288	12338	12388	12438	12488	12538	12588	12638	12688	12738	12788	12838	12888	12938	12988	13038	13088	13138	13188	13238	13288	13338	13388	13438	13488	13538	13588	13638	13688	13738	13788	13838	13888	13938	13988	14038	14088	14138	14188	14238	14288	14338	14388	14438	14488	14538	14588	14638	14688	14738	14788	14838	14888	14938	14988	15038	15088	15138	15188	15238	15288	15338	15388	15438	15488	15538	15588	15638	15688	15738	15788	15838	15888	15938	15988	16038	16088	16138	16188	16238	16288	16338	16388	16438	16488	16538	16588	16638	16688	16738	16788	16838	16888	16938	16988	17038	17088	17138	17188	17238	17288	17338	17388	17438	17488	17538	17588	17638	17688	17738	17788	17838	17888	17938	17988	18038	18088	18138	18188	18238	18288	18338	18388	18438	18488	18538	18588	18638	18688	18738	18788	18838	18888	18938	18988	19038	19088	19138	19188	19238	19288	19338	19388	19438	19488	19538	19588	19638	19688	19738	19788	19838	19888	19938	19988	20038	20088	20138	20188	20238	20288	20338	20388	20438	20488	20538	20588	20638	20688	20738	20788	20838	20888	20938	20988	21038	21088	21138	21188	21238	21288	21338	21388	21438	21488	21538	2

Date Sampled	Hauled Waste mgd	S.S. Conc mg/l	Grease Conc mg/l	Daily lbs/d	B.O.D. Conc mg/l	Daily lbs/d	sBOD Conc. Mg/l.	pH
1/1/2017							0	
1/2/2017							0	
1/3/2017							0	
1/4/2017		1580					0	1270
1/5/2017		450	21		1716		0	
1/6/2017		82					0	
1/7/2017							0	
1/8/2017							0	
1/9/2017		670			30		0	545
1/10/2017		1020	51		3588		0	
1/11/2017					1884		0	1318
1/12/2017		1100					0	
1/13/2017		192			861		0	
1/14/2017		350			1512		0	
1/15/2017		227					0	
1/16/2017		314			1414		0	
1/17/2017		287			64		0	
1/18/2017		72					0	
1/19/2017							0	
1/20/2017		116			174		0	
1/21/2017		532			372		0	
1/22/2017		740			322		0	
1/23/2017							0	
1/24/2017		670					0	
1/25/2017		300					0	
1/26/2017		164					0	
1/27/2017							0	
1/28/2017							0	
1/29/2017							0	
1/30/2017							0	
1/31/2017							0	
Total	0.000	526	36		1067			

CHS 10281 on 1.10.2017. CHS
offline 1.12.2017-1.30.2017. Per
DM

Calculations									
Barge Sampled Flow				Threshold Values			Extra Strength Unit Costs		
Flow	Conc. (mg/L)	Pounds	Charge (\$/lb)	Monthly Avg. (MGD)	Monthly lbs/d	TSS (mg/L)	Tier 1	Tier 2	Tier 1
TSS	526	0	\$0.00	0.000	0	300	300	1200	0.098
O&G	36	0	\$0.00	0	0	100	100	400	0.33
BOD	1067	0	\$0.00	0	0	250	250	2000	0.478
Actual Costs									
Total Monthly Flow (\$/1000 gal)				Monthly Permit Fee			Monthly Sample and Analysis Fee		
0				Total			\$500.00		
Extra Strength				Tier 1 (T1)			Tier 2 (T2)		
Domestic Strength				Pounds			Pounds		
TSS				0			0		
O&G				0			0		
BOD				0			0		
Total				\$0.00			\$0.00		
Total Strength Charge				unit cost			unit cost		
TSS				\$0.098			\$0.196		
O&G				\$0.165			\$0.33		
BOD				\$0.239			\$0.478		
Total				\$0.00			\$0.00		
Total Tax				\$0.00			\$0.00		
Total				\$0.00			\$0.00		

Green, Pete

From: Desiree McCaslen <dmccaslen@sioux-city.org>
Sent: Thursday, February 02, 2017 3:42 PM
To: Green, Pete
Subject: Fwd: New Monthly Effluent
Attachments: New Monthly Effluent - 2-1-17 12AM.pdf

Here are the discharge volumes for Big Ox for the month of January. No hauled wastewater all discharges came through the new force main and only a small portion of wastewater overflowed out of the DAF feed tank untreated due to the issues with the temporary bypass pump set up on the force main.

Please let me know if you need anything else.

>>> <mnelson@big

Desiree McCaslen

Pretreatment Manager

Office: (712)-279-6987

Cell: (712)-898-6793

Fax: (712)-279-6191



Before printing this e-mail, please determine if it is truly necessary

oxenergy.com> 2/1/2017 12:05 AM >>>

Report attached

Mike Nelson

Director of Maintenance and Service

- 📧 MNelson@ncorpservices.com
- 📞 1-920-863-4762
- 📞 1-920-863-3043
- 📞 1-920-863-5546
- 📍 PO Box 610, Denmark, WI 54208
- 📍 6601 Cty Rd. R, Denmark, WI 54208



We're Hiring at
Careers.BOEteams.com



Consider the environment. Do you really need to print this email?

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. This message contains confidential information and is intended only for the individuals named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.



Monthly Effluent
Report
Month of Jan-17

Date	GPD
2017-01-01	152
2017-01-02	148
2017-01-03	0
2017-01-04	349,802
2017-01-05	1,844,689
2017-01-06	1,739,325
2017-01-07	1,484,281
2017-01-08	705,557
2017-01-09	1,057,907
2017-01-10	1,652,190
2017-01-11	1,776,601
2017-01-12	1,821,336
2017-01-13	1,623,809
2017-01-14	1,070,617
2017-01-15	0
2017-01-16	934,285
2017-01-17	1,322,965
2017-01-18	1,246,313
2017-01-19	1,433,168
2017-01-20	1,376,156
2017-01-21	927,495
2017-01-22	411,968
2017-01-23	1,121,901
2017-01-24	1,449,067
2017-01-25	1,346,112
2017-01-26	1,210,219
2017-01-27	1,437,650
2017-01-28	1,294,021
2017-01-29	705,247
2017-01-30	1,326,489
2017-01-31	1,662,044
Monthly Total	34,331,514

Industry (Permitted)	Facility Address	City	Zip	Contact	Phone	Email	SSC Lift Station
BPI	360 164th St	South Sioux City, NE	68776	Curt Sales	605-217-8153	csales@beefproducts.com	Bennett
CHS	395 164th St	South Sioux City, NE	68776	Chris Oehler	402-404-8522	Christopher.oehler@chsinc.com	Bennett
Richardson	5005 Dakota Ave	South Sioux City, NE	68776	Darin Jensen	402-494-7068	darin.jensen@richardson.ca	Bennett
Big Ox Energy (40 CFR 437)	1616 D Ave	South Sioux City, NE	68776	Jason Osbahr	920-615-0257	josebahr@bigoxenergy.com	Bennett
Barto Trucking	2450 9th Ave	South Sioux City, NE	68776	Chris Baltushis	402-241-5008	chris@liquidtrucking.com	Riverlift
Sioux Plating (40 CFR 433)	428 E. 9th St	South Sioux City, NE	68776	Doug Boddy	402-494-2477	doug.boddy@siouxplating.com	Riverlift
Industry (Not Currently Permitted)							
ADM	425 W. 39th St.	South Sioux City, NE	68776	Harlan Prieksat	402-494-30481	harlan.prieksat@adm.com	Bennett
Flatwater Metals	424 W. 39th St.	South Sioux City, NE	68776	Kathy Rassmussen	402-404-2595		Bennett

Industry	2012	2013	2014	2015	2016	Notes
BPI	0	0	0	0	0	
CHS	12-TSS	12-TSS	7-TSS	3-TSS	0	The TSS permit violations are a monthly average discharge violation. On April 1, 2015 the Pretreatment Program eliminated the monthly average TSS limit from the permits. If the permit limits were still in place CHS would have continued to be in significant non-compliance.
	1-pH				0	
Richardson	0	0	0	0	0	
Bimbo	2-pH	0	0	0	0	More frequent settling tank pump out seemed to manage the issue with low discharge pH.

Green, Pete

From: Desiree McCaslen <dmccaslen@sioux-city.org>
Sent: Friday, January 27, 2017 4:09 PM
To: Green, Pete
Subject: RE: South Sioux Industrial Compliance and Data

The ADM sample you are referring to was us playing sewer investigation trying to determine the impact raw molasses would have on the collection system and odor control. They were also requesting to haul a load to the treatment plant.

Sent from my Verizon, Samsung Galaxy smartphone

----- Original message -----

From: "Green, Pete" <Green.Pete@epa.gov>
Date: 1/27/17 3:51 PM (GMT-06:00)
To: Desiree McCaslen <DMCCASLEN@sioux-city.org>
Subject: RE: South Sioux Industrial Compliance and Data

>>> "Green, Pete" 01/27/2017 15:51 >>>

Desiree- You *did* in fact send me the 2012-2016 CHS compliance data, as referred to below. Any comment about the other questions? Thanks. Pete

From: Green, Pete
Sent: Monday, January 16, 2017 2:40 PM
To: Desiree McCaslen <dmccaslen@sioux-city.org>
Subject: Re: South Sioux Industrial Compliance and Data

Desiree- Thanks for the information. Could you clarify something about the ADM table? It appears that they discharged (or spilled?) molasses on 10/23/14? Under sample *type* the table says "11/5/14"? Do you know how many gallons they discharged? Also, were you able to sleuth out any more information about the sample from Big Ox that we split on 1/12? Thanks.

From: Desiree McCaslen <dmccaslen@sioux-city.org>
Sent: Thursday, January 12, 2017 11:31:43 AM
To: Green, Pete; Tipton, Lantz
Cc: Jim Maynes; Justin Vondrak; Mark Simms
Subject: South Sioux Industrial Compliance and Data

Attached is the discharge compliance data fro CHS, Richardson and BPI from 2012-present. In the spreadsheet I have also included the information that you requested from ADM.

I will check the discharge sampler at Big Ox this afternoon to determine how many samples it collected from midnight 1.11.2017-1.12.2017.

Thanks.

ADM	Sample Date	Type	pH	TSS	BOD	FOG
	7/20/2016	G	5.81	7760	3031	115
	7/20/2016	portable	8.52	4029	2650	44
	10/23/2014	11/5/2014		303100	135088	
	11/4/2013	portable		513	7925	

*raw molasses

Industry	2012	2013	2014	2015	2016	Notes
BPI	0	0	0	0	0	
CHS	12-TSS	12-TSS	7-TSS	3-TSS	0	The TSS permit violations are a monthly average discharge violation. On April 1, 2015 the Pretreatment Program eliminated the monthly average TSS limit from the permits. If the permit limits were still in place CHS would have continued to be in significant non-compliance.
	1-pH				0	
Richardson	0	0	0	0	0	
Bimbo	2-pH	0	0	0	0	More frequent settling tank pump out seemed to manage the issue with low discharge pH.

Attachment 17

Determined to be Confidential Business Information

Attachment 18

Determined to be Confidential Business Information

Green, Pete

From: Wilmarth, Catherine <CWilmarth@KelleyDrye.com>
Sent: Thursday, February 02, 2017 11:02 AM
To: Green, Pete
Cc: Guerry, William M.; Cooperman, Jonathan
Subject: Response to Notice of Potential NPDES Permit Violation 1/11/17
Attachments: EPA CWA SWPPP Violations from Inspection.pdf

Hello Pete,

Apologies for the delay in getting this response to you—there was some confusion on our end regarding who would transmit this letter to you. Please find attached our response to your Notice of Potential NPDES Permit Violation issued on January 11, 2017. Let us know if you have any questions.

Thank you,
 Catherine

KELLEY
DRYE

Catherine Wilmarth

Kelley Drye & Warren LLP
 Washington Harbour, Suite 400
 3050 K Street, NW, Washington, DC 20007
 o: (202) 342-8473 | m: (301) 642-7402
cwilmarth@kelleydrye.com
[Website](#)



The information contained in this E-mail message is privileged, confidential, and may be protected from disclosure; please be aware that any other use, printing, copying, disclosure or dissemination of this communication may be subject to legal restriction or sanction. If you think that you have received this E-mail message in error, please reply to the sender.

This E-mail message and any attachments have been scanned for viruses and are believed to be free of any virus or other defect that might affect any computer system into which it is received and opened. However, it is the responsibility of the recipient to ensure that it is virus free and no responsibility is accepted by Kelley Drye & Warren LLP for any loss or damage arising in any way from its use.



Peter M. Green
U.S. Environmental Protection Agency
ENSV/EMWC
300 Minnesota Ave
Kansas City, Kansas 66101-2907

RE: NPDES Permit No. NER910000

Big Ox Energy Siouxland

BOE Response to Notice of Potential National Pollution Discharge Elimination System
(NPDES) Permit Violation

Dear Mr. Green,

It was a pleasure meeting you and it was great to be able to share Big Ox Energy's ("BOE's") renewable energy goals, including recovering natural gas and CO₂ from waste materials and being 100% non-reliant on the earth's water and gas resources for plant operations in the future. I do appreciate your guidance and comments along with Lantz, Curtis, and Terry as it is important for us to learn and to make us a stronger company overall.

I met with the staff of the plant after the visit and BOE could not locate any of the information needed to provide detailed written documentation of the three outlined potential violations, other than the printouts that I received from McMahon when you had asked for them. The two key team members who worked on the permits and were listed in the plans are no longer with BOE. With Ron Harnack, who was in charge of the inspections and recordkeeping, leaving the Plant Manager position, BOE could not locate the files that he had submitted or filed onsite at the plant.

I contacted our engineering firm, McMahon Engineers and Architects, who was instrumental in developing the Construction Storm Water General Permit Notice of Intent, the actual Construction Storm Water ("CSW") permit and the Storm Water Pollution Prevention Plan ("SWPPP") to discuss where BOE stood with our permit documentation, potential violations, and necessary corrective actions. McMahon contacted the Nebraska Department of Environmental Quality ("NDEQ") office and confirmed that BOE had submitted a copy of the CSW General Permit Notice of Intent and that it was approved. McMahon also asked whether the CSW had been closed out, which it had not been. McMahon was informed by Emma Truit that a Notice of Termination should have been submitted to close out the permit; however, the CSW permit that covered our facility had been updated. Emma said that she would just terminate the permit and a Notice of Termination would not be required to be submitted. Please let me know if BOE needs to follow up on any further action here. McMahon also had a copy of the actual document that Ron Harnack had submitted and that had been received by the NDEQ on June 20, 2016 along with the resultant NDEQ acknowledgement on July 26, 2016.



I have sat down with McMahon and have reviewed the existing SWPPP that they have on file. BOE is in the process of updating the entire permit to reflect the proper team member assignments. Perry Winkler is BOE's new Plant Manager, and George Hoyes is the new Corporate Operations Manager. BOE is also reviewing the all of the requirements of this permit and putting action plans in place to address them as required. Below are the action items that BOE is currently working on:

- Proper documentation and training of personnel and responsibilities
 - Facility Contact Person – **Completed**
 - Update of the Stormwater Pollution Team – **Completed**
 - Training Log for SWPPP monitoring – In Progress
- Update of the pollutants onsite – **Completed**
- Review of the spill and leak potential areas – In Process
 - After reviewing the spill on the concrete during the walk-through, BOE decided to review all the areas of the plant again for potential risks
 - The seeding of the new areas will be reviewed and reseeded as necessary in the spring to prevent run
- Creation of internal leak/spill investigation form – In Process
 - This was recommended during the walk-through on January 11th
 - Spill observed during the walk through on the north side of the receiving bay was cleaned and the new form will be used to properly document the incident
- Documentation of housekeeping measures and maintenance activities
 - Although the documentation is not written down for these items, they are completed almost on a daily basis.
 - A check-off list is being compiled with existing cleaning practices. The plant has a maintenance software for work orders that BOE is looking into using for this practice
- Monitoring location labeling – In Progress
 - Each of the outfall points will be labeled
- Section 6.2 of the SWPPP
 - McMahon is in the process of creating a procedures form for the quarterly benchmarking
 - BOE will use the ACS lab to complete the analytic testing
 - BOE will sample upon the next sizable event
- Section 6.2.1 of the SWPPP
 - McMahon has put together a Facility & Site Inspection Report worksheet that the plant personnel can use to record the data



- BOE is working on implementing this worksheet in plant operations
 - This will be completed this month
- Section 6.2.2 of the SWPPP
 - McMahon has put together a plant Quarterly Visual Assessment worksheet that plant personnel can use to record the data
 - Currently, BOE is waiting for an event to be able to perform the Visual Assessment
- BOE intends on filling out the Annual Comprehensive Assessment as part of this review of the entire SWPPP at the Siouxland Facility
 - BOE will work with McMahon on a form for this assessment
 - BOE expects to have this completed by the first part of February

BOE is making great progress in organization, follow-through, and proper written documentation in all areas related to the SWPPP. BOE has been very vigilant on making sure that there have been no spills or leaks that could possibly pollute the stormwater exiting the facility. I believe the walk through on January 11th outlined the care and diligence that the plant has put into place to make sure that there are no pollutants making their way to the stormwater flows.

Sincerely,

Jason Osbahr
Director of Project Development and Engineering

Green, Pete

From: Wilmarth, Catherine <CWilmarth@KelleyDrye.com>
Sent: Tuesday, February 07, 2017 4:45 PM
To: Green, Pete
Cc: Guerry, William M.; Cooperman, Jonathan
Subject: RE: Response to Notice of Potential NPDES Permit Violation 1/11/17
Attachments: Facility Site Inspection Form.pdf; Quarterly Visual Assessment.pdf; Spill Response Form.pdf; Storm Event Monitoring Report.pdf

Hello Pete,

Big Ox has provided us with additional documents in response to the January 11 notice. Please let us know if you have any questions or have any issues with the files.

Thank you,
Catherine

Catherine Wilmarth

Kelley Drye & Warren LLP
(202) 342-8473 | cwilmarth@kelleydrye.com

From: Wilmarth, Catherine
Sent: Thursday, February 02, 2017 2:13 PM
To: 'green.pete@epa.gov' <green.pete@epa.gov>
Cc: Guerry, William M. <WGuerry@KelleyDrye.com>; Cooperman, Jonathan <JCooperman@KelleyDrye.com>
Subject: RE: Response to Notice of Potential NPDES Permit Violation 1/11/17

Hello All,

Pete pointed out that I attached the wrong file in my prior email. Attached here is the response.

Thank you,
Catherine

Catherine Wilmarth

Kelley Drye & Warren LLP
(202) 342-8473 | cwilmarth@kelleydrye.com

From: Wilmarth, Catherine
Sent: Thursday, February 02, 2017 12:02 PM
To: 'green.pete@epa.gov' <green.pete@epa.gov>
Cc: Guerry, William M. <WGuerry@KelleyDrye.com>; Cooperman, Jonathan <JCooperman@KelleyDrye.com>
Subject: Response to Notice of Potential NPDES Permit Violation 1/11/17

Hello Pete,

Apologies for the delay in getting this response to you—there was some confusion on our end regarding who would transmit this letter to you. Please find attached our response to your Notice of Potential NPDES Permit Violation issued on January 11, 2017. Let us know if you have any questions.

Thank you,
Catherine

KELLEY
DRYE

Catherine Wilmarth

Kelley Drye & Warren LLP
Washington Harbour, Suite 400
3050 K Street, NW, Washington, DC 20007
o: (202) 342-8473 | m: (301) 642-7402
cwilmarth@kelleydrye.com
[Website](#)



The information contained in this E-mail message is privileged, confidential, and may be protected from disclosure; please be aware that any other use, printing, copying, disclosure or dissemination of this communication may be subject to legal restriction or sanction. If you think that you have received this E-mail message in error, please reply to the sender.

This E-mail message and any attachments have been scanned for viruses and are believed to be free of any virus or other defect that might affect any computer system into which it is received and opened. However, it is the responsibility of the recipient to ensure that it is virus free and no responsibility is accepted by Kelley Drye & Warren LLP for any loss or damage arising in any way from its use.

Facility & Site Inspection Report

General Information			
Facility Name			
Permit No.		Location	
Date of Inspection		Start/End Time	
Inspector's Name(s)			
Inspector's Title(s)			
Inspector's Contact Information			
Type of Inspection: <input type="checkbox"/> Regular (Quarterly) <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event			
Weather Information			
Has there been a storm event since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide: Storm Start Date & Time: Storm Duration (hrs): Approximate Amount of Precipitation (in):			
Weather at time of this inspection? <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other: Temperature:			
Have any discharges occurred since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe:			
Have any unidentified pollutants been discharged since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe:			
Are there any discharges at the time of inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe:			

Incidents of Noncompliance that Require Corrective Action if....

- An unauthorized release or discharge (e.g., spill leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at your facility;
- You become aware, or NDEQ determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
- An inspection or evaluation of your facility by a NDEQ official, EPA official, or local entity, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit;
- You find in your routine facility inspection, quarterly visual assessment, or comprehensive site inspection that your control measures are not being properly operated and maintained;
- Construction or a change in design, operation, or maintenance at your facility significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharged;
- The average of 4 quarterly sampling results exceeds an applicable benchmark; If less than 4 benchmark samples have been taken, but the results are such that an exceedance of the 4 quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than 4 times the benchmark level) this is considered a benchmark exceedance;

Good House Keeping and Best Management Practices

- Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.

Good House Keeping and Best Management Practices		Findings and Remedial Action Documentation:
Roof clear of debris - Digester 1	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Roof clear of debris - Digester 2	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Roof clear of debris - Digester 3	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Is the Site Map current and accurate?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Is the SWPPP inventory of activities, materials and products current?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Is equipment washed and/or cleaned only in designated areas?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Is all wash water captured and properly disposed of?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are all fueling areas free of contaminant buildup and evidence of chronic leaks / spills?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are structures in place to prevent precipitation from accumulating in containment areas?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are maintenance tools, equipment and materials stored under shelter, elevated and covered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are all drums and containers of fluids stored with proper cover and containment?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are exteriors of containers kept outside free of deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are any vehicles and/or equipment leaking fluids? Identify leaking equipment.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Is there evidence of leaks or spills since last inspection? Identify and address.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are paved surface free of accumulated dust/sediment and debris?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are all waste receptacles located outdoors? In good condition? Not leaking contaminants? Closed when is not being accessed? External surface and area free of excessive contaminant buildup?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	

Good House Keeping and Best Management Practices		Findings and Remedial Action Documentation:
<p>Are the following areas free of accumulated dust/sediment, debris, contaminants, and/or spills/leaks of fluids?</p> <ul style="list-style-type: none"> - Digester 1 Roof - Digester 2 Roof - Building Roof - Pallet, bin, and drum storage areas - Maintenance shops - Equipment staging areas (loaders, tractors, trailers, forklifts, etc.) - Other areas of industrial activity 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<p>Are spill kits available in the following locations?</p> <ul style="list-style-type: none"> - Fueling stations - Transfer and mobile fueling units - Vehicle and equipment maintenance areas 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<p>Do the spill kits contain all the permit required items?</p> <ul style="list-style-type: none"> - Oil absorbents capable of absorbing 15 gallons of fuel - A storm drain plug or cover kit - A non-water containment boom, a minimum of 10 feet in length with a 12 gallon absorbent capacity - A non-metallic shovel - Two five-gallon buckets with lids 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<p>Are contaminated absorbent materials properly disposed of?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<p>Are damaged materials stored inside a building or another type of storm resistance shelter?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<p>Are all uncontained material piles stored in a manger that does not allow discharge of impacted stormwater?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<p>Are scrap metal bins covered?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<p>Are outdoor containers covered?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<p>Are BMPs and treatment structures in good repair and operational?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<p>Are BMPs and treatment structures free from debris buildup that may impair function?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	

Good House Keeping and Best Management Practices		Findings and Remedial Action Documentation:
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Do any of the following apply to the discharge at the outfalls during a storm event? <ul style="list-style-type: none"> - Contains floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination? - Water from washing vehicles or equipment, steam cleaning and/or pressure water is comingling with the stormwater or entering storm drains 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Were any discharges from domestic wastewater, noncontact cooling water, or process wastewater (including leachate) observed during the inspection?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	

Overall Site Issues

Below are some general site issues that should be assessed during inspections.

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2	Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3	Are storm drain inlets properly protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Are materials that are potential stormwater	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
	contaminants stored inside or under cover?			
6	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7	(Other)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Site & Facility Examinations

Describe any industrial materials, residue, or trash that may have or could come into contact with stormwater:

Describe any leaks or spills from industrial equipment, drums, tanks and other containers:

Describe offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site:

Describe tracking of raw, final, or waste materials from areas of no exposure to exposed areas:

Outfalls

Describe evidence of pollutants discharging to receiving waters at the facilities Outfalls (Outfall 1 & Outfall 2), and the condition of and around the outfall, including flow dissipation measures to prevent scouring:

Non-Compliance

Describe any incidents of non-compliance not described above:

Additional Control Measures

Describe any additional control measures needed to comply with the permit requirements not described above:

SWPPP Revisions

Describe any required revisions to the SWPPP resulting from the inspection:

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print name and title: _____

Signature: _____ **Date:** _____

Spill Response Form

Date of Spill: _____

Time of discovery: _____ am/pm

Duration: From: _____ am/pm To: _____ am/pm

Location of Spill: _____

Spill Material: _____

Spilled to (circle all that apply): Air Drain Pond On-site Soil Storm Water Ditch

Concrete or Asphalt Pad Other: _____

Estimated Quantity: _____

Prevailing weather conditions (e.g., wind speed and direction): _____

Description of the release (including cause):

Corrective actions taken:

Could spill have been prevented? Explain:

Were there any injuries or fatalities: Yes No Unknown

Agencies or individuals notified:

1.	_____	By: _____	Time: _____	am/pm
2.	_____	By: _____	Time: _____	am/pm
3.	_____	By: _____	Time: _____	am/pm
4.	_____	By: _____	Time: _____	am/pm
5.	_____	By: _____	Time: _____	am/pm
6.	_____	By: _____	Time: _____	am/pm
7.	_____	By: _____	Time: _____	am/pm
8.	_____	By: _____	Time: _____	am/pm
9.	_____	By: _____	Time: _____	am/pm
10.	_____	By: _____	Time: _____	am/pm

Signature: _____

Date: _____

Title: _____

SPILL OBSERVER ACTION CHECKLIST

Spill Observer: _____ Telephone Number: _____

1. ☐ Attend to injured personnel, ensure safety of all others if required
2. ☐ Determine source of leak
3. ☐ Stop source of leak if it can be safely done
4. ☐ Verify product type (s), identify material(s), and estimate quantity spilled
5. ☐ Look at SDS requirements for handling chemical (personal protective equipment required, etc.)
6. ☐ Notify the Authorized Individuals/Alternate Authorized Individuals and assist with initial response actions as desired
7. ☐ Contain product and/or keep product away from storm water sewers by blocking or diking to prevent discharge off site, if can be done safely
8. ☐ Keep personnel/responders upwind of spill to avoid exposure to hazardous vapors
9. ☐ Keep spillage area under surveillance until danger or hazardous conditions have been eliminated if required

AUTHORIZED INDIVIDUAL ACTION CHECKLIST

Authorized Individual: _____ Telephone Number: _____

1. ☐ Evaluate the situation and assume control
2. ☐ Notify Fire Department and Police Department as appropriate
3. ☐ Make regulatory notifications of spill and proposed actions if required; Document names of agencies called, persons who received calls, and the times the calls were made;
4. ☐ Call out cleanup contractors if necessary; Advise them of the location of the spill, the nature of the spill and the products involved;
5. ☐ Advise neighboring property owners and operators of any threat to their property or personnel;
6. ☐ Determine whether adjacent streets or roads should be blocked
7. ☐ Determine level of response needed, hazards or product(s) involved, and proper response guidelines to be followed
8. ☐ Direct containment and cleanup activities
9. ☐ Allow adequate time for dissipation of vapors before resuming operations

IMMEDIATE ACTION IN THE EVENT OR THREAT OF A FIRE OR EXPLOSION

1. ☐ Call 911
2. ☐ Warn everyone at the facility and initiate evacuation procedures
3. ☐ Close valves, shut down pumps, etc. (only if it can be SAFELY done)
4. ☐ Attempt to extinguish the fire using hand-held or wheeled fire extinguishers only if the fire is small and there is little risk of the fire growing out of control rapidly; ONLY those employees that have been trained on the use of fire extinguishers may attempt to extinguish a small fire;

Quarterly Visual Assessment

General Information			
Facility Name			
Permit No.		Location	

Quarterly Visual Assessment Requirement:

Once each quarter for the entire permit term, a stormwater sample must be collected from each outfall. A visual assessment should be performed on each sample as follows:

- Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event;
- For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge; The 72-hour (3-day) storm interval does not apply if you document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period;

Visual Assessment Inspection Report:

Outfall #1 Sample

Discharge Type (runoff or snowmelt): _____

Sample Collection Date & Time: _____

Visual Assessment Date & Time: _____

Personnel collecting the sample: _____ Signature: _____

Personnel performing the visual assessment: _____ Signature: _____

If applicable, why was the sample not collected within the first 30 minutes of discharge of the storm event?

Water Quality Characteristic	Description
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids	
Suspended Solids	
Foam	
Oil Sheen	
Other obvious indicators of stormwater pollution	
Probable sources of any observed stormwater contamination	

Outfall #2 Sample

Discharge Type (runoff or snowmelt): _____

Sample Collection Date & Time: _____

Visual Assessment Date & Time: _____

Personnel collecting the sample: _____ Signature: _____

Personnel performing the visual assessment: _____ Signature: _____

If applicable, why was the sample not collected within the first 30 minutes of discharge of the storm event?


Water Quality Characteristic	Description
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids	
Suspended Solids	
Foam	
Oil Sheen	
Other obvious indicators of stormwater pollution	
Probable sources of any observed stormwater contamination	

Corrective Action Required

Describe any corrective action required as a result of the quarterly visual assessment:

Attachment 8

**Industrial Storm Water – Storm Event Monitoring Report
(ISW – SEMR)**

Form Approved 1/10/2011	Nebraska Department of Environmental Quality Industrial Storm Water – Storm Event Monitoring Report (ISW – SEMR)	
A. Permit Tracking Number: NER _____		
B. Facility Information		
1. Facility Name: _____		
2. Facility Location Address:		
a. Street: _____		
b. City: _____ c. State: ____ d. zip code: _____ - ____		
3. Additional Facility Information (Optional)		
Contact Name: _____ Phone: _____ - _____ - _____ Ext. _____		
E-mail (optional): _____		
4. ISW – SEMR Preparer (Complete if ISW – SEMR was prepared by someone other than the person signing the certification section)		
Prepared by: _____		
Organization: _____		
Phone: _____ - _____ - _____ Ext. _____		
E-mail (optional): _____		
C. Discharge Information		
1. Identify Monitoring Period:		
<input type="checkbox"/> Quarter 1 (January 1 – March 31)		
<input type="checkbox"/> Quarter 2 (April 1 – June 30)		
<input type="checkbox"/> Quarter 3 (July 1 – September 30)		
<input type="checkbox"/> Quarter 4 (October 1 – December 31)		
<input type="checkbox"/> Check here if proposing alternative monitoring periods due to semi-arid climate, or freezing conditions		
<input type="checkbox"/> Quarter 1: From ____/____ To ____/____		
<input type="checkbox"/> Quarter 2: From ____/____ To ____/____		
<input type="checkbox"/> Quarter 3: From ____/____ To ____/____		
<input type="checkbox"/> Quarter 4: From ____/____ To ____/____		
2.a. Are you required to monitor for any hardness dependent metals (cadmium, copper, chromium, lead, nickel, silver, zinc)? <input type="checkbox"/> YES <input type="checkbox"/> NO		
2.b. If so, what is the hardness of the receiving water? _____ mg/L		
D. Outfall Information		
1. How many outfalls are identified in the SWPPP? ____ List the identification code (name, 'SW-outfall 1') for each outfall in the table below.		
2. Do any of the outfalls discharge substantially identical effluents? <input type="checkbox"/> YES <input type="checkbox"/> NO		
3. If yes, for each monitored outfall, indicate outfall names that are substantially identical in the table below.		
3.a. Monitored Outfall Name*	3.b. Substantially Identical Outfalls (list those determined to be substantially identical to outfall identified in 3.a.)	3.c. No Discharge?
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
<small>*Reference attachment if additional space is needed to complete the table.</small>		

Form Approved
1/10/2010Nebraska Department of Environmental Quality
Industrial Storm Water – Storm Event Monitoring Report
(ISW – SEMR)**E. Monitoring Information**

Permit Tracking Number: NER _____

1. Nature of Discharge: ☐ Rainfall (Complete line items 1.a., 1.b., & 1.c.) ☐ Snowmelt

1.a. Duration of Rain event (hours): _____ 1.b. Rainfall amount (inches): _____ 1.c. Time since previous measureable storm event (days): _____

2.a. Outfall Name	2.b. Monitoring Type (QBM, I, O)*	2.c. Parameter	2.d. Quantity or concentration	2.e. Units	2.f. Results Description	2.g. Collection Date	2.h. Exceedance due to natural background pollutant levels	2.i. No further pollutant reductions achievable?
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>

* (QBM) – Quarterly benchmark monitoring; (I) – Impaired waters monitoring; (O) – Other monitoring as required by NDEQ

3. Comments and/or Explanation of any monitoring results (also reference attachments here)

F. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

1.a. Print Name: _____

b. Title: _____

c. Signature: _____ d. Date: ____/____/____ (MM/DD/YYYY)

e. E-mail: _____ (optional)